

U.S. ARMY
MATERIEL DEVELOPMENT
AND READINESS COMMAND



MANUFACTURING
METHODS &
TECHNOLOGY

PROJECT EXECUTION
REPORT

SECOND CY 82

PREPARED BY **APRIL 1983**
USA INDUSTRIAL BASE ENGINEERING ACTIVITY

MANUFACTURING TECHNOLOGY DIVISION

ROCK ISLAND, ILLINOIS 61299

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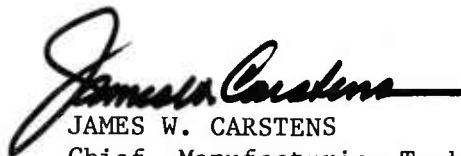
08 APR 1983

DRXIB-MT

SUBJECT: Manufacturing Methods and Technology (MMT) Program Project
Execution Report, Second Half CY82

SEE DISTRIBUTION

1. Reference AR 700-90, paragraph 3-4j(1), 15 Mar 82, subject: Logistics, Army Industrial Preparedness Program.
2. The Project Execution Report is a summary compilation of the MMT Program Project Status Reports (RCS DRCMT-301) submitted to IBEA from DARCOM Major Army Subcommands (SUBMACOM) and project managers. This document is used as a management tool for monitoring the progress of MMT projects. There are separate sections in the report showing projects that are new, active, and completed. Also, included is a discussion of the overall DARCOM Program.
3. Persons who are interested in the details of an individual project should contact the Manufacturing Technology representative at the SUBMACOM. A list of those representatives is included in Appendix IV to this report. The Project Officer for this task is P. Swim, AUTOVON 793-6521.


JAMES W. CARSTENS

Chief, Manufacturing Technology Division

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DISCUSSION

Background

The Army Manufacturing Methods and Technology (MMT) Program was established in 1964 as a part of the Army Production Base Support (PBS) Program. The MMT Program has goals of improving existing manufacturing technology, translating new technology into production line processes, and supporting the modernization and expansion of the military hardware production base. The program is governed by the provisions of AR 700-90, Chapter 3.

Composition of the Report

This MMT Project Execution Report provides the status summaries of 444 active projects which have a total authorized cost of \$256,729,900. Total MMT program statistics, as well as the summaries of the active projects are also included. The report is compiled, edited, and published for HQ, DARCOM by the Manufacturing Technology Division of the Army Industrial Base Engineering Activity (IBEA) in accordance with AR 700-90, paragraph 3-4j(1).

Distribution of this report is extended to Army materiel developers and users and to counterparts in the Navy and the Air Force. Inquiries on the detailed technical aspects of any individual project may be answered by the MMT Program representative of the action command under which the project was completed or is being executed. Inquiries or suggestions concerning this report or other facets of the MMT Program may also be directed to the Manufacturing Technology Division of IBEA.

The report is composed of three major sections:

a. Projects Added 2nd Half, CY82 - A list divided by organization of all projects funded during the second half of CY82. Included is a narrative of the problem for each project.

b. Final Status Reports Received During 2nd Half, CY82 - A list divided by organization of all projects for which final status reports were received during the second half of CY82. Included is a narrative of the final status for each project.

c. Summary Project Status Report - These reports are divided by organization and include a summary of funding by fiscal year and a narrative status of the work accomplished during the six month period for each active project.

Status Report Submissions

One of the two areas which has been of concern in the past has shown substantial improvement. This area is delinquent status reports. The second area, final status reports without technical reports, showed no improvement. Figure 1 summarizes by Command these two situations. It can be noted from Figure 1 that 8% of all the required status reports (DRCMT 301) and 53% of all the required technical reports were not available.

STATUS REPORT (RCS DRCMT 301) SUBMISSIONS

Command	301 Reports Required	301 Reports Submitted	Number and (%) of Delinquent 301 Reports	Number of Final 301 Reports	Number of Tech Rpts Submitted w/Final Status Reports	Number and (%) of Delinquent Technical Reports
AMETA	6	6	0 (0%)	0		
DESCOM	9	6	3 (33%)	1	1	0 (0%)
MERADCOM	16	16	0 (0%)	6	4	2 (33%)
ERADCOM	44	38	6 (14%)	3	0	3 (100%)
AMMRC	8	8	0 (0%)	2	1	1 (50%)
NLABS	5	1	4 (80%)	1	0	1 (100%)
TECOM	3	3	0 (0%)	1	0	1 (100%)
AVRADCOM	68	59	9 (13%)	24	3	21 (88%)
TSARCOM	4	4	0 (0%)	1	0	1 (100%)
CECOM	10	10	0 (0%)	1	0	1 (100%)
MICOM	46	43	3 (7%)	15	10	5 (33%)
TACOM	68	66	2 (3%)	9	6	3 (33%)
ARRADCOM/ ARRCOM (Ammo)	157	141	16 (10%)	24	9	15 (63%)
ARRADCOM/ ARRCOM (Weapons)	111	109	2 (2%)	23	17	6 (26%)
TOTAL	555	509	45 (8%)	111	52	59 (53%)

Figure 1

Accuracy of MMT summary information for management depends on a complete submission of all the project status reports for each command. In December, a call letter was mailed out to each SUBMACOM. Enclosed with this letter was a computerized listing of the projects for which a status report was required for this reporting period. Also, phone calls were made in March to those commands whose submission had not been received. As noted in Figure 1, there were 45 reports which were not submitted by the due date of 15 March. The 8% delinquency encountered this period is an improvement over the last report period, which had an 18% delinquency, and an even greater improvement over the second CY81, which had a 24% delinquency. This improvement was due to the fact that the SUBMACOMS are now provided a full 2 1/2 months (per the new AR 700-90, 15 Mar 82) from the end of the report period to compile and submit their status reports. Yet any delinquency creates a void in the information presented in the compiled report. Continuing improvement in this area will insure a useful review of the progression of the MMT Program.

Relative to the second area of concern, there has always been a requirement that a technical report be prepared for each project. The technical report is an accepted vehicle, and in some cases the only vehicle, for true technology transfer and its importance cannot be overstated. In May 1981, a letter from the Directorate of Manufacturing Technology reinforced the requirement that final status reports will not be submitted without a completed technical report. Of the 65 final status reports submitted during the previous reporting period, 29 of them, or 45% did not have technical reports included. For this period, as noted in Figure 1, 111 final status reports were received with 59 of them, or 53% being delinquent the technical report. Greater strides will have to be made if true technology transfer is expected to occur. The 111 projects for which final status reports were received during this period can be found in a separate section on page 21 where the final work status is given for each project.

Program Summary

Manufacturing Methods and Technology (MMT) projects and efforts are major elements of the Army's Manufacturing Technology (MANTECH) Program. AR 700-90 succinctly describes the MANTECH objective as the improvement of the industrial readiness and efficiency of the production base for Army materiel. Further defined objectives are stated in the Statement of Principles for the DOD Manufacturing Technology Program. This Statement, originating at the Deputy Under Secretary of Defense level, not only establishes ground rules for the Program but highlights the level of emphasis that the Program receives.

To attain the objectives described in the Statement of Principles, the Army funds discrete work units, called "Projects," on a yearly basis. These projects, identified by a seven-digit number, contain work requests, which upon completion will result in an end product whose technical transfer can be effected. At times, in order to have a total work package which is implementable, (i.e., which can achieve the payback for which the work was funded) the scope can be of such a magnitude that total funding in one fiscal year can be an inefficient use of resources.

In this event, the total work might be multi-year funded, (i.e., be more than one project, each having a technically transferrable end product). These total implementable work units are called "Efforts". These efforts can consist of many projects or just be one project, depending on the amount of work required to achieve the implementable technical goal. Efforts are identified by a four-digit number which is the same as the last four digits of a project or projects which make up the effort.

The following three charts (Figures 2-4) summarize MMT project reporting and funding status for the 2nd Half of CY82. These summaries include data from the major Army subcommands (SUBMACOM) that have active projects and the AMMRC and AMETA sponsored projects. Cumulative figures pertaining to project distribution and expenditures of funds on contract and in-house are provided. Projects that were closed out during the reporting period are not included in the data used for these summaries. On the following three charts, comparisons are made between parallel reporting periods (2nd half, CY81 and 2nd half, CY82) in order to observe the project number and funding changes that occur within each Command and within the total program.

A summary of the MMT Program (Figure 2) indicates that the number of active projects has decreased by 12% in comparison with the 2nd half of CY81. The significant decrease is attributed to two reasons: 1) because of the problem associated with the conversion of the FY83 MMT program to the R&D account, fewer new projects were approved during this period than were approved during this same period last year, and 2) almost twice as many projects were closed out over last year's corresponding period.

MMT PROGRAM SUMMARY

Organization	Number of Projects			Funding Status		Percent Change
	2nd Half CY81	2nd Half CY82	Percent Change	2nd Half CY81	2nd Half CY82	
AMETA/DESCOM	9	14	56	3,682,000	5,474,000	49
MERADCOM	19	10	-47	6,118,500	4,060,500	-34
ERADCOM	39	41	5	25,516,200	29,561,900	16
AMMRC	4	6	50	9,036,000	13,495,300	49
NLABS	5	4	-20	643,500	390,000	-39
TECOM	3	2	-33	1,614,000	1,494,000	-7
AVRADCOM/TSARCOM	73	47	-36	25,303,600	28,029,200	11
CECOM	9	9	0	5,925,300	7,684,900	30
MICOM	58	31	-47	26,224,000	20,405,100	-22
TACOM	58	59	2	22,304,800	26,669,900	20
ARRADCOM/ARRCOM (Ammo)	145	133	-8	95,896,400	97,794,600	2
ARRADCOM/ARRCOM (Weapons)	82	88	7	16,628,500	21,670,500	30
TOTAL	504	444	-12	238,892,800	256,729,900	7

Figure 2

It can be noted that the largest decreases in number of projects were AVRADCOM/TSARCOM and MICOM. This is not unexpected since these organizations contributed over 1/3 of the large number of projects closed out during the period. The largest decrease in dollars was MICOM which show-

ed a reduction of \$6 million. While there was an overall decrease in the number of active projects, there was an actual increase in the total value of the active program. This reflects the closing out of older, lower dollar projects and the approval of newer, higher dollar projects.

A breakout of the active projects by fiscal year is shown in Figure 3. It can be noted that one FY75 project is still active. The only requirement which was left for this project (5 75 6494) was the completion and distribution of the final technical report. The status report received during the last period indicated that it would be closed out during this report period. However, this period's status report was delinquent, which results in continuing to carry the project as active.

ACTIVE PROJECTS BY FISCAL YEAR

Organization	75	76	7T	77	78	79	80	81	82	TOTAL
AMETA/DESCOM			1		1	1	1	3	7	14
MERADCOM						3	2	3	2	10
ERADCOM		2		4	3	7	9	8	8	41
AMMRC					1	1	1	2	1	6
NLABS						1	2	1		4
TECOM								1	1	2
AVRADCOM/TSARCOM				2	1	1	3	17	23	47
CECOM					1	1	1	4	2	9
MICOM					1	1	4	12	13	31
TACOM			1	1	4	4	6	17	26	59
ARRADCOM/ARRCOM (Ammo)	1	1	1	2	6	17	25	33	47	133
ARRADCOM/ARRCOM (Weapons)		1		2	1	4	14	24	42	88
TOTAL	1	4	3	11	19	41	68	125	172	444

2nd CY81 TOTAL	1	5	3	19	40	90	138	165	43	504
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Figure 3

Continuing emphasis is being placed on closing out older projects. The success of this effort is shown by comparing the fiscal years 75-78 for the 2nd half CY81 with the current period. A year ago, there were 68 active projects for these fiscal years. There were only 38 projects for these years reported during the 2nd half CY82.

Figure 4 indicates at what rate the project funds are being expended. Over the past three years, the active MMT program has shown an increasing contractor participation. The data from this period supports the continuance of that trend. For the second CY81 period, the contractor and in-house figures were \$138 million vs. \$101 million. For the second CY82

PROGRAM FUNDING EXPENDITURES

(MILLIONS)

Organization	Projects	Authorized Funding	Contractor		In-House	
			Amount	Expended	Remaining	Expended
AMETA/DESCOM	14	\$ 5.5	\$ 2.6	\$ 1.7 (56%)	\$ 2.5	\$ 0.3 (12%)
MERADCOM	10	4.1	3.5	2.5 (70%)	0.5	0.4 (71%)
ERADCOM	41	29.6	25.7	18.2 (71%)	3.9	2.4 (61%)
AMMRC	6	13.5	5.6	0.2 (3%)	7.9	7.9 (99%)
NLABS	4	0.4	0.3	0.2 (69%)	0.1	0.1 (100%)
TECOM	2	1.5	0.1	0.1 (100%)	1.4	*1.4 (99%)
AVRADCOM/TSARCOM	47	28.0	22.8	6.2 (27%)	5.2	2.1 (40%)
CECOM	9	7.7	5.3	2.2 (41%)	2.4	0.3 (13%)
MICOM	31	20.4	13.8	8.5 (61%)	6.6	2.6 (39%)
TACOM	59	26.7	11.4	8.2 (71%)	15.2	2.6 (16%)
ARRADCOM/ARRCOM (Ammo)	133	97.8	63.3	42.9 (67%)	34.5	20.8 (60%)
ARRADCOM/ARRCOM (Weapons)	88	21.7	7.6	3.6 (47%)	14.1	4.4 (31%)
TOTAL	444	\$256.9	\$162.0	\$94.5 (58%)	\$ 94.3	\$45.3 (48%)
2nd CY81 TOTAL	504	\$238.7	\$138.2	\$84.3 (61%)	\$100.7	\$37.6 (37%)

Figure 4

*All values rounded to one decimal place.

period, these same respective values are an even more diverse \$162 million vs. \$94 million. Figure 4 also shows that compared to the same period last year, contractor expenditures are very close (61% vs. 58%) and in-house expenditures are up (37% vs. 48%). The 45 delinquent projects also have an impact on this chart. There would have been additional in-house and contract funds expended that were not reported to IBEA.

MMT PROGRAM
PROJECTS ADDED 2ND HALF, CY82



PROJECTS ADDED IN 2ND HALF, CY82

ARRADCOM-ARRCOM (AMMO)

5 82 1600

THREE PIECE SHAFT FOR THE SUU-65/B TAILCONE

PREVENT PROPAGATION BETWEEN AMMUNITION ITEMS AND IN-PROCESS MATERIALS ON CONVEYORS.

ARRADCOM-ARRCOM (WPNS)

6 82 8254

AUTOMATED SURFACE COATING OF CANNON - PAINTING

IT REQUIRES APPROXIMATELY 2 1/2 HOURS PER TUBE TO APPLY ONE UNDER COAT AND TWO FINISH COATS OF PAINT BY MANUAL BRUSHING. CURRENT DRYING METHODS REQUIRE EXCESSIVE FLOOR SPACE AND OVERHEAD CRANE SUPPORT.

6 82 8305

INTEGRATED MANUFACTURING SYSTEM (IMS) - (CAM)

MI SYSTEMS ARE APPLIED LOCALLY BUT THERE IS NO DATA MANAGEMENT SYSTEM FOR THE ENTIRE MFG ACTIVITY. THIS INCREASES COST DUE TO LONG LEAD TIMES, SCHEDULE INTERRUPTIONS AND SHORTAGES OF MACHINE AVAILABILITY, LABOR AND MATERIAL.

6 82 8306

ON-LINE PRODUCTION INFORMATION SYSTEM (CAM)

THE MANUFACTURING DATA BASE CANNOT BE ACCESSED THROUGH AN ON-LINE DATA BASE SYSTEM, MAKING INTEGRATION OF AUTOMATED SYSTEMS FOR PROCESS PLANNING, TIME STDS GENERATION, FACILITIES/MOBILIZATION PLANNING AND PRODUCTION CONTROL SIMULATION DIFFICULT.

6 82 8346

DEBURRING OF BORE EVACUATOR HOLES

AN INABILITY TO SUCCESSFULLY AND CONSISTENTLY PRODUCE A SMOOTH RADIUS TO THE INTERNAL OPENING OF THE BORE EVACUATOR HOLES OF THE 120MM HAS LED TO EARLY CHROMIUM FAILURE.

6 82 8416

FLEXIBLE MACHINING SYSTEM - RIA (CAM)

FLEXIBLE MACHING SYSTEM (FMS) TECHNOLOGY OFFERS MANY ADVANTAGES TO PLANTS THAT MANUFACTURE PARTS IN LOW TO MID VOLUMN QUANTITIES. HOWEVER ESTABLISHING FEASIBILITY, PURCHASING, AND IMPLEMENTING FMS IS WIDE IN SCOPE AND VERY COMPLEX.

PROJECTS ADDED IN 2ND HALF, CY82
(CONTINUED)

6 82 8448

BRAIDED PROCESS FOR BORE EVACUATOR

A CAPABILITY TO MANUFACTURE COMPOSITE BORE EVACUATORS DOES NOT EXIST AT WATERVLiet ARSENAL, AND THE CURRENT METHOD OF MANUFACTURING THE EVACUATOR BY THE FILAMENT WINDING PROCESS BY A CONTRACTOR LOCATED IN GERMANY IS SLOW AND FOREIGN SUPPLIED.

TOTAL PROJECTS ADDED IN 2ND HALF, CY82 7

MMT PROGRAM

FINAL STATUS REPORTS RECEIVED DURING 2ND HALF, CY82



FINAL STATUS REPORTS RECEIVED DURING 2ND HALF, CY82

MERADCOM

E 79 3592

IMPROVED GRAPHITE REINFORCEMENT-PHASE 3

CONTRACTOR TASK IS COMPLETE EXCEPT FOR PREPARATION OF FINAL REPORT. IN-HOUSE PORTION OF WORK TO EVALUATE FIBER STRANDS AND COMPOSITES HAS BEGUN. CONTRACT FOR FINAL PHASE OF PROJECT IS BEING PROCESSED.

E 78 3604

SOLID STATE POWER SWITCH

REORGANIZATION OF DELTA ELECTRONICS INTO A DIVISION OF HELIONETICS CAUSED SEVERE SLIPPAGE OF THE PROGRAM. DURING THIS TIME, CMOS DEVICES CAME TO MARKET THAT MEET THE REQUIREMENTS OF THE SSPS. THE CMOS DEVICES ARE SIMPLER AND MORE RELIABLE.

E 79 3604

SOLID STATE POWER SWITCH

CONSIDERABLE EFFORT WAS EXPENDED IN ATTEMPTING TO LOCATE AND SOLVE THE MANY PROBLEMS ENCOUNTERED WHICH PREVENTED THE SSPS FROM FUNCTIONING PROPERLY. THE FY78 + FY79 PROJECTS WERE BOTH TERMINATED WITHOUT A SATISFACTORY PRODUCT.

E 79 3708

COATED FABRIC COLLAPSIBLE FUEL TANK-CIRCULAR SEAM WEAVING

THIS EFFORT ESTABLISHED THE FEASIBILITY OF PRODUCING SEAMLESS FABRIC SUITABLE FOR COLLAPSIBLE FUEL TANKS. COATING OF THIS SEAMLESS FABRIC WITH COMPATIBLE POLYMER YET TO BE REALIZED. MANUFACTURING TECHNOLOGY CONTINUING UNDER PROJECT E803708.

E 80 3717

HIGH TEMPERATURE TURBINE NOZZLE FOR 10 KW POWER UNIT

PROJECT WORK WAS COMPLETED. TURBINE NOZZLES WERE FABRICATED AND WILL BE TESTED IN THE FOLLOW-ON PROJECT F 81 3717. METAL SHROUDS WERE FABRICATED AND ASSEMBLED WITH THE NOZZLES. FINAL INSPECTION AND FLOW CHECKS WERE COMPLETED.

E 81 3745

MMT AL SKIN-GRAPHITE/EPOXY SANDWICH BRIDGE REINFORCEMENT

NO WORK HAS BEEN ACCOMPLISHED BECAUSE R+D FUNDS TO DEVELOP THE PROTOTYPE MATERIAL IN SUPPORT OF THIS MMT EFFORT WERE WITHDRAWN TO BE USED ON HIGHER PRIORITY R+D. THIS EFFORT HAS BEEN TERMINATED.

FINAL STATUS REPORTS RECEIVED DURING 2ND HALF, CY82
(CONTINUED)

DESCOM

G 80 0001

VOICE CONTROLLED PROGRAMMING OF COMPUTERS

A VOICE INPUT UNIT WAS LINKED WITH A CAD/CAM GRAPHICS SYSTEM AT TOBYHANNA ARMY DEPOT. THE INTEGRATED SYSTEM WAS DEMONSTRATED TO BE ABLE TO OPERATE EFFECTIVELY, EFFICIENTLY, AND WITH LITTLE OR NO DEGRADATION TO THE GRAPHICS CONTROLLER.

ERADCOM

H 80 3510

TRANSDUCER PROCESS TECHNOLOGY FOR MW DELAY LINES

THE TWO MOST CRITICAL STEPS HAVE BEEN IDENTIFIED- 1,1,1 ORDERED GOLD SUBSTRATE AND HIGH PRESSURE SPUTTERING. MOTOROLA ORDERED DEVICES FROM WESTINGHOUSE FOR XM-749. BETTER THAN 50 PERCENT YIELD FOR 4.0 GHZ SAW DEVICES. TECH RPT RELEASE ON 03/17/83.

H 79 3516

CRYOGENIC COOLER HYBRID MOTOR CIRCUIT

AEROFLEX COMPLETED ITS HYBRID CIRCUIT WORK AND DOCUMENTED IT IN A TV TAPE SHOWN AT THE ELECTRONICS MINISYMPOSIUM AT MTAG 82. FINAL TECHNICAL REPORT RECEIVED FROM AEROFLEX. CIRCUIT MAY BE USED IN STIRLING COOLER FOR AN/TAS=4.

2 77 9813

RUGGEDIZED LOW COST QUADRANT DETECTOR FOR CLGP.

NEGOTIATED TERMINATION OF TI CONTRACT HAS BEEN COMPLETED. MARTIN MARIETTA CAN MEET ALL FUTURE COPPERHEAD QUADRANT DETECTOR REQUIREMENTS. TI COULD NOT OVERCOME SODIUM POISONING OF SILICON DETECTOR. TERMINATION TOOK 2 1/2 YEARS.

AMMRC

M 77 6350

MATERIALS TESTING TECHNOLOGY (MTT)

SEE SUBTASKS BELOW FOR PROJECT STATUS.

FINAL STATUS REPORTS RECEIVED DURING 2ND HALF, CY82
(CONTINUED)

M 77 6350 2431
COMPUTERIZED COLOR MATCHING SYSTEM

SEE PROJECT NO M 80 6350-2431 FOR STATUS.

M 82 6390
MMT PROGRAM IMPLEMENTATION AND INFORMATION TRANSFER
PUBLICATION OF MANTECH JOURNAL, PUBLICATION OF MANTECH
NOTES.

NLABS

Q 77 8053
CADAM OF PARACHUTE HARDWARE

OPERATIONAL FEASIBILITY OF THE CAD/CAM SOFTWARE WAS
ESTABLISHED. RESTRUCTURING OF THE APT PROGRAM IS NECESSARY
FOR THE SYSTEM TO BECOME USABLE. A FINAL REPORT IS
AVAILABLE.

TECOM

O 80 5071
TECOM PRODUCTION TEST METHODOLOGY ENGINEERING MEASURES

SEE SUBTASKS BELOW.

O 80 5071 50
TOXIC GAS MEASUREMENTS DURING WEAPON FIRINGS

TESTING HAS BEEN CONDUCTED USING THE NON-PORTABLE TOXIC GAS
MEASURING UNIT IN CONJUNCTION WITH A WIND MACHINE. THE DATA
OBTAINED WILL BE REDUCED + ANALYZED DURING THE NEXT PHASE
OF THIS TASK.

O 80 5071 62
DISPERSION DATA FOR AUTOMATIC WEAPONS AT LONG RANGE

USING DATA GATHERED DURING A LITERATURE SEARCH ON THE M240
MACHINEGUN + THE SQUAD AUTOMATIC WEAPON SYS. IT WAS
DETERMINED THAT THE LONG RANGE DISPERSION FOR AUTOMATIC
WEAPONS COULD BE PREDICTED BASED ON SHORT RANGE DISPERSION
DATA.

FINAL STATUS REPORTS RECEIVED DURING 2ND HALF, CY82
(CONTINUED)

0 80 5071 64

IMPROVED ENGINE WEAR ANALYSIS

SEPARATION OF SUSPENDED METALLIC PARTICLES IN OIL BY FILTRATION + CENTRIFUGING WERE INVESTIGATED, HOWEVER, NOT COMPLETED. A PROCEDURE BASED ON COLUMN CHROMATOGRAPHY APPEARS TO HAVE PROMISE. A HIGH PRESSURE CHROMATOGRAPH HAS BEEN PROCURED.

AVRADCOM

1 80 7052

ULTRASONICALLY-ASSISTED COLD FORMING OF TITANIUM NOSE CAPS

EQUIPMENT IS MODIFIED AND TECHNICAL PERSONNEL ARE INSTRUCTED IN ITS USE.

1 78 7055

ULTRASONIC WELDING OF HELICOPTOR FUSELAGE STRUCTURES

PROJECT TERMINATED. RESULTS OF COUPON TESTING OF WELD BONDED SPECIMENS WAS UNSATISFACTORY.

1 78 7091

PROCESSING AIRCRAFT COMPONENTS USING PULTRUDED MATERIALS

ALL WORK HAS BEEN COMPLETED. THE FINAL REPORT HAS BEEN APPROVED, AND WILL BE PRINTED AND DISTRIBUTED IN JANUARY. THE PULTRUSION AND POST FORMING TECHNIQUE WAS SUCCESSFULLY SHOWN. IMPLEMENTATION IS ANTICIPATED ON FUTURE ACAP HELICOPTER DESIGNS.

1 81 7183

SEMI-AUTO COMP MANUF SYS F/HELI FUSELAGE SECONDARY STRUC

THE CONTRACT WAS TERMINATED. A FINAL REPORT HAS BEEN RECEIVED.

1 81 7197

FABRICATION OF INTEGRAL ROTORS BY JOINING

PILOT PRODUCTION SUCCESSFULLY COMPLETED. FRACTURE MECHANICS DATA GENERATION COMPLETE. MACHINING OF ROTORS FOR SPIN TEST AND ENGINE TEST COMPLETE.

FINAL STATUS REPORTS RECEIVED DURING 2ND HALF, CY82
(CONTINUED)

1 80 7199

SURFACE HARDENING OF GEARS, BEARINGS AND SEALS BY LASERS

THE FINAL REPORT HAS BEEN PUBLISHED AND DISTRIBUTED. THE PROJECT WAS TERMINATED SINCE THERE WAS NO LOGICAL COURSE OF ACTION WITHIN THE FUNDS AVAILABLE.

1 79 7284

SUPERPLASTIC FORMING/DIFFUSION BONDING OF TITANIUM

FINAL TECHNICAL REPORT BEING DRAFTED BY HUGHES HELICOPTER COMPANY.

1 79 7286

HIGH QUALITY SUPERALLOY POWDER PROD F/TURBINE COMPONENTS

THIS IS A JOINT AIR FORCE + ARMY MULTI-YEAR EFFORT. GE HAS COMPLETED ITEMS 7 AND 9 OF THE EFFORT WHICH WAS FUNDED UNDER THIS PROJECT. FINAL REPORT IS UNDER PREPARATION.

1 80 7286

HIGH QUALITY SUPERALLOY POWDER PROD F/TURBINE COMPONENTS

THIS PROJECT SUPPORTED IN-HOUSE ENGINEERING FOR PRIOR YEAR (1797286) JOINT SERVICE EFFORT. THE PRIOR YEAR EFFORT HAS BEEN COMPLETED.

1 80 7298

HIGH TEMPERATURE VACUUM CARBURIZING

THIS PROJECT HAS BEEN COMPLETED. THE PROCESS SPECIFICATION FOR AISI 9310 HAS BEEN COMPLETED. BMS-7-223 AND AISI 9310 STEEL TEST SPECIMENS ARE BEING PRODUCED FOR TEST AND EVALUATION OF THE VACUUM CARBURIZING PROCESS.

1 81 7300

IMPROVED LOW CYCLE FATIGUE CAST ROTORS

A DYNAMIC SIMILARITY EVALUATION OF THE SUBJECT ROTOR CONCLUDED THAT ALL REQUIREMENTS COULD BE MET WITH EXISTING TOOLING.

1 80 7338

COMPOSITE TAIL SECTION

DUE TO FUNDING AND SCHEDULE SLIPPAGES, THIS PROGRAM HAS BEEN TERMINATED. A FINAL REPORT HAS BEEN SUBMITTED.

FINAL STATUS REPORTS RECEIVED DURING 2ND HALF, CY82
(CONTINUED)

1 81 7338

COMPOSITE TAIL SECTION

THIS PROJECT WAS CANCELLED. FUNDS WERE REPROGRAMMED. A FINAL TECHNICAL REPORT HAS BEEN RECEIVED WHICH SUMMARIZES THE EFFORT (FY 79, 80, AND 81 PROJECTS).

1 81 7339

FILAMENT WOUND COMPOSITE FLEXBEAM TAIL ROTOR

WORK IS CONTINUING ON PHASE III UNDER A REVISED SCOPE OF WORK NECESSITATED BY FUNDING CONSTRAINTS. ALL WORK IS COMPLETED EXCEPT THE FINAL REPORT WHICH IS IN PROCESS.

1 82 7339

FILAMENT WOUND COMPOSITE FLEXBEAM TAIL ROTOR

ALL FUNDS WERE WITHDRAWN AND REPROGRAMMED. THE PROJECT WAS TERMINATED AFTER THE AAH-PM DECIDED NOT TO FUND THE DESIGN ALTERATIONS AND TESTING NECESSARY FOR FLIGHT QUALIFICATION BECAUSE OF THE HIGH COSTS INVOLVED.

1 81 7340

COMPOSITE MAIN ROTOR BLADE

PROJECT IS COMPLETED. THE EFFORT IS CONTINUING UNDER PROJECT 1 82 7340.

1 80 7342

PULTRUSION OF HONEYCOMB SANDWICH PANELS

ALL WORK IS COMPLETED. THE EFFORT IS CONTINUING UNDER PROJECT 1 82 7351.

1 81 7342

PULTRUSION OF HONEYCOMB SANDWICH STRUCTURES

ALL WORK IS COMPLETED. THE EFFORT IS CONTINUING UNDER PROJECT 1 82 7342.

1 79 7371

INTEGRATED BLADE INSPECTION SYSTEM (IBIS)

FINAL SOFTWARE DEBUGGING IS PRESENTLY BEING ACCOMPLISHED IN PREPARATION FOR A SCHEDULED MAY 1983 IBIS I END OF CONTRACT BRIEFING.

FINAL STATUS REPORTS RECEIVED DURING 2ND HALF, CY82
(CONTINUED)

1 80 7371

INTEGRATED BLADE INSPECTION SYSTEM (IBIS)

SEE PROJECT 1 82 7371 FOR STATUS.

1 81 7371

INTEGRATED BLADE INSPECTION SYSTEM (IBIS)

SEE PROJECT 1 82 7371 FOR STATUS.

1 81 7382

LOW COST COMPOSITE MAIN ROTOR BLADE FOR THE UH-60A

CONTRACT AWARDED TO SIKORSKY. PRELIMINARY DESIGN REFINEMENT, MANUFACTURING COMPATABILITY STUDIES, SELECTION OF BLADE CONFIGURATION, AND SPECIMEN TOOL DESIGN AND FABRICATION HAS BEEN COMPLETED. BLADE EXTERNAL CONFIGURATION SAME AS CURRENT BLADE.

1 80 7412

INFRARED DETECTOR FOR LASER WARNING RECEIVER

PERKIN-ELMER CORP. ELECTRO OPTICS DIVISION IS PRODUCTION ENGINEER METHODS FOR MAKING, ASSEMBLING, AND TESTING INTERDIGITATED IR DETECTORS. INDIUM ARSENIDE MATERIAL SUPPLIERS WERE QUALIFIED. WILL BE FOR AN/AVR-2 IR DETECTOR FOR USE ABOARD AIRCRAFT.

1 81 7412

INFRARED DETECTOR FOR LASER WARNING RECEIVER

FOLLOW-ON TO ABOVE. PERKIN-ELMER CORP. CONTINUED TO DEVELOP A PRODUCTION CAPABILITY FOR INDIUM ARSENIDE INTERDIGITATED IR DETECTORS. MASKING, PHOTOLITHOGRAPHIC, ETCHING AND BONDING TECHNIQUES WERE USED.

CECOM

F 79 9835

INTEGRATED THIN FILM TRANSISTOR DISPLAY

AEROJET FOUND THAT PRESENT TECHNOLOGY WILL NOT PERMIT LAYING DOWN MULTIPLE LAYERS OF DISPLAY AND DRIVER FILMS. HYBRID CONSTRUCTION WAS USED TO BUILD DEMO UNITS. ROUGH SURFACE IS NOT SUITED FOR SUBSEQUENT FILMS. REPORT WILL DESCRIBE PROBLEMS.

FINAL STATUS REPORTS RECEIVED DURING 2ND HALF, CY82
(CONTINUED)

MICOM

3 81 1021

CPPP MACHINED CYLINDRICAL PARTS (CAM)

THIS PROJECT IS COMPLETE. A COMPUTER MANAGED PROCESS PLANNING SYSTEM HAS BEEN DEVELOPED AND IS CURRENTLY BEING USED AT THREE COMPANIES. THE SYSTEM HAS BEEN APPLIED ON TWO MILITARY AIRCRAFT ENGINES.

R 80 1023

DIGITAL FAULT ISOLATION F/HYBRID MICROELECTRONIC MODULES

HUGHES DEVELOPED AN AUTOMATIC BACK TRACE + PROBING METHOD TO DETECT DIGITAL FAULTS IN HYBRID CIRCUITS. DTS-70 TESTAID + FASTRACE SOFTWARE ACHIEVED .94 COMPREHENSION. GO/NO-GO TEST IS PERFORMED IN 5 SEC. SYSTEM TO BE IMPLEMENTED AT HUGHES TUCSON GOCO.

R 80 1024

MMT RADIO FREQUENCY STRIPLINE HYBRID COMPONENTS

HUGHES DEVELOPED A MODEL OF BEAMLEAD VARACTOR DIODES USED IN A FREQUENCY DOUBLER. THIN DIELECTRIC SHEET SUSPENDER SUBSTRATE WAS USED TO MATCH IMPEDANCE OF DIODES + WAVEGUIDES. DIELECTRIC THICKNESS KEPT AT .005 IN. MIN. DIODES ARE REFLOW SOLDERED.

3 81 1026

PRODUCTION OF LOW COST MISSILE VANES

THIS PROJECT IS COMPLETE. IT WAS DEMONSTRATED THAT A COMPOSIT MISSILE VANE CAN BE MANUFACTURED AND THAT AUTOMATED PRODUCTION IS FEASIBLE. THE PROJECT WAS RECOGNIZED THROUGHOUT INDUSTRY AS A SIGNIFICANT ACCOMPLISHMENT.

3 81 1050

LOW COST BRAIDED ROCKET MOTOR COMPONENTS

THIS PROJECT HAS BEEN COMPLETED SUCCESSFULLY. THE INTERIM TECH REPORT, RK-CR-82-6, HAS BEEN DISTRIBUTED.

3 81 1086

COBALT REPLACEMENT IN MARAGING STEEL-ROCKET MOTOR COMPONENTS

THIS PHASE ONE TECHNICAL EFFORT IS COMPLETE. TECHNICAL REPORT RK-CR-83-1 IS DISTRIBUTED. PHASE TWO CONTINUING UNDER 3821086.

FINAL STATUS REPORTS RECEIVED DURING 2ND HALF, CY82
(CONTINUED)

3 81 1121

MISSILE MANUFACTURING PRODUCTIVITY IMPROVEMENT PROGRAM

ROCKWELL AND MARTIN MARIETTA REVIEWED THEIR HELLFIRE FACILITIES AND PREPARED PHASE I FINAL REPORTS. PROPOSALS FOR PHASE II WERE RECEIVED AT MICOM AND ARE BEING EVALUATED. FOLLOW-ON ACTIVITIES WERE POSTPONED BY HELLFIRE PROJECT OFFICE.

R 78 3165

PRODN PROCESS + TECHNIQUES FOR SEALING HYBRID MIC-CIR PACK

M+K ASSC, SOLID STATE EQUIP + HUNTSVILLE MICROCIRCUITS PROVIDED A SYSTEM FOR BAKING, PARALLEL SEAM WELDING + GROSS LEAK TESTING HYBRID PACKAGES. SYSTEM IS CAPABLE OF SEALING + LEAK TESTING HYBRID PACKAGES AT RATE OF 100 PER HR WITH 95 PERCENT YIELD.

R 80 3263

PRINTED WIRE BOARDS UTILIZING LEADLESS COMPONENTS

MICROELECTRONICS CORP EVALUATED VAPOR-PHASE SOLDER REFLOW AND CONFORMAL COATINGS FOR PCBs FABRICATED WITH LEADLESS COMPONENTS. SINGLE COMPONENT TYPE CONFORMAL COATING MATERIAL WAS SELECTED. PRODUCTION PROOF UNDERWAY IN PHASE II PROJECT R 81 3263.

R 80 3294

PRODUCTION PROCESSES FOR ROTARY ROLL FORMING

THE INTERIM TECHNICAL REPORT FOR THIS FIRST PHASE IS COMPLETE. PHASE TWO IS PROCEEDING UNDER 3813294.

R 80 3396

INJECTION MOLDING OF LOW COST-ONE PIECE NOZZLES

EIGHTY MLRS NOZZLES WERE MOLDED FROM SIX MATERIALS. ACCEPTABLE PARTS WERE MADE FROM FOUR OF THOSE MATERIALS. PROCESSING SPECS AND QA REQMTS WERE PREPARED. FACILITY IMPLEMENTATION COSTS WERE ESTIMATED AT \$135K. THIS FACILITY COULD PRODUCE 120 PER DAY.

R 80 3411

MFG OF NON PLANAR PRINTED CIRCUIT BOARDS

FINAL REPORT- THE PROCESS FOR PRODUCING A CASSEGRAIN ANTENNA SYSTEM WERE ESTABLISHED. THE PROCESSES FOR PRODUCING AN 8 LAYER CIRCUIT BOARD WERE DEFINED. BOTH OF THESE PROCESSES WILL BE REFINED BY MEANS OF THE FY82 PROJECT.

FINAL STATUS REPORTS RECEIVED DURING 2ND HALF, CY82
(CONTINUED)

R 80 3435

SIMPLIFICATION OF HIGH-POWER THICK FILM HYBRIDS

WESTINGHOUSE REDUCED MATERIAL COSTS FOR LOGIC SUBSTRATES BY 50PCT WITH REWORKABLE BACKING LAYER/SOLDER SYSTEM FOR SUBSTRATE TO HEADER ATTACHMENT. CAPABILITY FOR BONDING ALUMINUM WIRES UP TO .020 INCH IN DIAMETER WAS ESTABLISHED.

3 81 3447

RECOVERY OF CARBORANES FROM WASTE PROPELLANT

THIS PROJECT WAS CANCELLED WITH NO EXPENDITURE OF FUNDS.

R 78 3453

GROUND LASER LOCATOR DESIGNATOR PRODUCTION IMPROVEMENTS

CRYSTAL TECHNOLOGY HAS COMPLETED ALL CONTRACTUAL WORK RESULTING IN PRODUCTION PROCESSES CAPABLE OF 250 LITHIUM NIOBATE Q-SWITCHES PER MONTH. THE Q-SWITCHES HAVE QUALIFIED FOR USE BY MOST US MANUFACTURERS OF MILITARY RANGING AND DESIGNATOR SYSTEMS.

TACOM

T 78 5014

IMPROVED FOUNDRY CASTINGS UTILIZING CAM

THE COMPUTER PROGRAMS FOR CASTING SOLIDIFICATION SIMULATION ARE COMPLETED FOR THE NO BAKE SAND PROCESS. TEST PLATE CASTINGS AND 100 TORSION BAR HOUSINGS WERE CAST AT BLAW-KNOW FOUNDRY. THERMAL DATA WAS COLLECTED ON SELECTED ARMOR STEEL CASTINGS.

T 81 5014

IMPROVED FOUNDRY CASTINGS UTILIZING CAM

GREEN SAND CASTINGS FOR TEST PLATES AND 8 TORSION BAR HOUSINGS WERE FABRICATED AT LEBANON STEEL FOUNDRY. THERMAL DATA WAS COLLECTED ON SELECTED ARMOR STEEL CASTINGS. ADDITIONAL EFFORT ON COMPUTER PROCEDURES IS CONTINUED UNDER MMT PROJECT T825014.

T 81 5019

STORAGE BATTERY-LOW MAINTENANCE

BATTERY REQMT AND BASIC DESIGN OF STORAGE BATTERY ESTABLISHED. CONTRACT FOR PROTOTYPE BATTERIES IN PLASTIC CONTAINERS COMPLETED AND BATTERIES DELIVERED TO TACOM. EFFORT CONTINUING UNDER 4825019.

FINAL STATUS REPORTS RECEIVED DURING 2ND HALF, CY82
(CONTINUED)

T 79 5024

GEAR DESIGN MFG UTILIZING COMPUTER TECHNOLOGY (CAM) PH2

THIS PROJECT IS COMPLETE. THE FINAL REPORT WILL BE
DISTRIBUTED IN FEB. 1983.

T 79 5064

LIGHT WEIGHT SADDLE TANK (PHASE II)

FUEL TANKS FOR 5-TON VEHICLE UNDERWENT FEASIBILITY TESTING
AT YUMA PROVING GROUNDS, COLD REGION AND TROPIC TEST SITES
WITHOUT FAILURES. DEFICIENCIES OVERCOME BY ADDING RIBS
(FILLET) IN TANK AND MODIFYING CORNER RADII. FINAL TECH
REPORT ISSUED.

T 80 5067

PLASTIC BATTERY BOX (PHASE II)

RESULTS SHOW POLYETHYLENE IS DURABLE MATERIAL WHICH WILL
LAST THE LIFE OF THE VEHICLE. RETAINER EXHIBITED CRACKS
AFTER DROPPING FROM A CERTAIN ANGLE, BUT MODIFICATION WILL
CORRECT THE PROBLEM. FINAL TECH REPORT IS BEING FORWARDED
SEPARATELY.

T 80 5090

IMPROVED AND COST EFFECTIVE MACHINING TECHNOLOGY (PHASE II)

ALL MACHINING OPERATIONS FOR PHASE II COMPLETED. DATA HAS
BEEN COMPUTERIZED. AN INTERIM REPORT HAS BEEN WRITTEN. A
MACHINEABILITY HANDBOOK WILL BE PUBLISHED AT THE CONCLUSION
OF PHASE III.

T 81 6054

ADVANCED METROLOGY SYSTEMS INTEGRATION

THIS PROJECT WAS CANCELLED. THE REMAINING \$300K WAS
DIVERTED TO ANOTHER PROGRAM. THIS EFFORT WAS RESUMED UNDER
PROJECT NO T 82 6054.

T 81 6100

ENGINEERING SUPPORT DIRECTORATE TECH MOD PROGRAM

THIS PROJECT IS COMPLETE. A SCOPE OF WORK FOR A
COMPREHENSIVE EVALUATION OF THE ENGINEERING SUPPORT
DIRECTORATE WAS ESTABLISHED. THE RESULTS FROM THE PROPOSED
WORK WILL PROVIDE A PLAN FOR TECHNICAL MODERNIZATION OF
DESIGN, TEST AND MFG CAPABILITY.

FINAL STATUS REPORTS RECEIVED DURING 2ND HALF, CY82
(CONTINUED)

ARRADCOM-ARRCOM (AMMO)

8 80 0915

GROUP TECH REQUIREMENTS DEFINITION ELECTRONICS

THIS PROJECT IS COMPLETE. THE FUNDAMENTAL CHARACTERISTICS OF A GROUP TECHNOLOGY ELECTRONICS CLASSIFICATION/CODING SYSTEM HAVE BEEN DEVELOPED.

5 79 1296

MT FOR CB FILTERS

A FINAL TECHNICAL REPORT HAS BEEN PREPARED SIDE FILLING FILTERS AND PREPARATION OF WHETLERIZED CHARCOAL.

5 80 1296

MANUFACTURING TECHNOLOGY FOR CB FILTERS

A FINAL TECHNICAL REPORT WAS PUBLISHED ON VELOCITY TRAVERSE METHODS OF PREDICTING FILTER PERFORMANCE AND CONTROL.

5 79 1345

BIOLOGICAL WARNING SYSTEM

PROJECT COMPLETED.

5 80 1345

BIOLOGICAL WARNING SYSTEM

PROJECT COMPLETED.

5 79 1903

DIE CAST TAILCONE AND DESIGN MACHINE FOR BLU-96/B

THIS PROJECT HAS BEEN SUCCESSFULLY EXECUTED AND WAS FORMALLY CONCLUDED DEC 1981.

5 80 1903

DIE CAST TAILCONE AND DESIGN MACHINE FOR BLU-96/B

THIS PROJECT HAS BEEN SUCCESSFULLY EXECUTED AND WAS FORMALLY CONCLUDED DEC 1981.

5 79 4059

OPTIMIZATION - NITROGUANADINE IN M30 PROPELLANT

PROJECT COMPLETED AND FINAL REPORT ARLCD-CR-82042 PUBLISHED.

FINAL STATUS REPORTS RECEIVED DURING 2ND HALF, CY82
(CONTINUED)

5 81 4061

NITROGUANIDINE PROCESS OPTIMIZATION

THE NQ DEMONSTRATION PLANT WAS OPERATED TO OPTIMIZE GN PROCESS PARAMETERS. THIS PORTION OF THE MULTI-YEAR EFFORT IS COMPLETE.

5 79 4064

AUTO LAP OPERATIONS FOR 105MM TANK CARTRIDGES

A PRODUCTION SYSTEM FOR THE AUTOMATED LOAD AND ASSEMBLY OF A FAMILY OF 105MM TANK CARTRIDGES HAS BEEN DESIGNED. TECHNICAL DATA FOR THE LINER TO CASE ASSEMBLY IS AVAILABLE. A TECHNICAL REPORT WILL BE AVAILABLE.

5 79 4124

FABRICATION OF CONTROL ACTUATION SYSTEM HOUSINGS

THIS PROJECT WAS TERMINATED.

5 82 4189

HIGH FRAGMENTATION STEEL PRODUCTION PROCESS

PROJECT TERMINATED BY PBM.

5 80 4231

IN-PLANT REUSE OF POLLUTION ABATED WATERS

UV-OZONE SYSTEM EVALUATED UNDER 5 DIFF OPERATING MODES. CONVENTIONAL CARBON TREATMENT EVALUATED FOR 2 MODES. ECON ANAL REVEALED ECONOMICAL TREAT 3 PLANT AREAS WITH UV-OZONE + RECYCLE IN OTHER 3 PLANT AREAS-KANSAS AAP. NOT ECONOMICAL. TREAT AT LA AAP.

5 79 4281

CONSERVATION OF ENERGY AT ARMY AMMUNITION PLANTS

SEE THE FOLLOWING SUBTASKS FOR WORK STATUS.

5 79 4281 A01

PROCESS ENERGY INVENTORY

THIS SUBTASK WAS COMPLETED WITH THE PROCESS ENERGY INVENTORY AT IDWA AAP AND THE FINAL TECHNICAL REPORT WAS PUBLISHED.

FINAL STATUS REPORTS RECEIVED DURING 2ND HALF, CY82
(CONTINUED)

5 79 4281 A02
OPTIMIZED INSULATION

FINAL REPORT ARLCD-CR-82006 WAS PUBLISHED.

5 79 4281 A03
SYNTHETIC NATURAL GAS FOR PROCESS OPERATIONS

FINAL REPORT ARLCD-CR-82048 WAS PUBLISHED.

5 79 4281 A04
ENERGY RECOVERY FROM WASTE HEAT

THE HEAT PIPE EXCHANGERS WERE CONSTRUCTED, TESTED AND DELIVERED TO RADFORD AAP. INSTALLATION OF THE HEAT PIPE HEAT RECOVERY SYSTEM INITIATED. THIS COMPLETES THIS YEAR OF THE TOTAL EFFORT FOR THIS TASK.

5 79 4281 B04
WASTE HEAT RECOVERY

SEVERAL CONCEPTS FOR WASTE HEAT BOILER SYSTEMS WERE EVALUATED. DRAWINGS AND SPECIFICATIONS FOR THE CONCEPT CHOSEN FOR SCRANTON AAP WERE PREPARED. ALL WORK ON THIS TASK IS COMPLETE AND A FINAL REPORT HAS BEEN PUBLISHED.

5 81 4298
EVALUATION OF DIMETHYLNITROSAMINE DISPOSAL ON HAAP B-LINE
WORK HAS BEEN COMPLETED.

5 82 4359
IMPROVED PROCESS TECHNOLOGY FOR INSPECTION OF CLOTH

THE PROJECT WAS TERMINATED DUE TO COST GROWTH REQUIRED FOR CONTRACTED SERVICES.

5 80 4411
SMALL CALIBER AMMUNITION PROCESS IMPROVEMENT PROGRAM

FOUR SEPARATE CIRCUIT BOARDS WERE CONSOLIDATED INTO ONE ON THE PRIMER INSERT SM. BULLET + CASE FEEDER EFFICIENCY INCREASED FROM 85 PCT. TO OVER 98 PCT. PROTOTYPE BEARING AND TOOL CONDITION ANALYSIS SYSTEM FEASIBILITY WAS DEMONSTRATED.

FINAL STATUS REPORTS RECEIVED DURING 2ND HALF, CY82
(CONTINUED)

5 78 4444

BODY FOR M42/M46 GRENADE

WORK COMPLETED AWAITING FINAL TECH REPORT.

5 80 4462

FORCED AIR DRY FOR MULTI-BASED PROPELLANTS

ALL WORK HAS BEEN COMPLETED AND THE FINAL TECH REPORT
PUBLISHED.

5 79 4466

EVALUATE TNT, CYCLOTOL, OCTOL IN MELT-POUR FACILITY

PROJECT COMPLETE. FINAL TECHNICAL REPORT ARLCD-TR-82023,
DEC 82, WILL BE DISTRIBUTED UPON PUBLICATION.

5 80 4480

HIGH SPEED HEAD TURN TOOL MOD F/SC AMMO PROD

A COMPLETE SET OF IMPROVED HEADTURN TOOL MODULES WERE
PURCHASED AND INSTALLED. THEY ARE PERFORMING SATISFACTORILY
AND HAVE INCREASED THE TOOL MODULES PERFORMANCE TO OVER
41000 PIECES BETWEEN ADJUSTMENTS.

5 81 4558

THERMAL DEHYDRATION PROCESS SAFETY AND OPERATIONAL REDESIGN

THE THERMAL DEHY WAS MODIFIED AND DEBUGGED. SAMPLING AND
ANALYTICAL METHODS WERE ESTABLISHED. THE FUTURE YEAR TEST
PLAN WAS DEVELOPED AND APPROVED. THIS PORTION OF THE
MULTI-YEAR EFFORT IS COMPLETE.

5 78 6774

MANUFACTURING METHODS FOR APDS PROJECTILE

PROCESS STUDIES WERE COMPLETED AND THE EQUIPMENT DESIGNED.
A MOLDING SYSTEM, UTILIZING A FOUR CAVITY MOLD, AND A TRIM
STATION WERE FABRICATED. DEMONSTRATIONS WERE COMPLETED AT
THE VENDORS FACILITY AND THE EQUIPMENT WAS SHIPPED TO FORD
AEROSPACE.

5 79 6774

MANUFACTURING METHODS FOR APDS PROJECTILE

THE EQUIPMENT WAS ASSEMBLED AND SAMPLE PROJECTILES WERE
SUBMITTED FOR BALLISTIC TESTING. TESTING WAS PERFORMED OVER
THE FULL TEMPERATURE RANGE WITH SATISFACTORY PERFORMANCE.
THIS PROJECT RESULTED IN IMMEDIATE SAVING OF \$235K. MORE
WITH LATER BUYS.

FINAL STATUS REPORTS RECEIVED DURING 2ND HALF, CY82
(CONTINUED)

ARRADCOM-ARRCOM (WPNS)

6 79 7317

OPTIMIZATION OF STEP THREAD TOOLING

CUTTER REDESIGN WAS COMPLETED AND TESTS WERE CONDUCTED WHICH LEAD TO THE SELECTION OF AN IMPROVED TOOL STEEL MATERIAL. A SAVING OF ONE HOUR WAS REALIZED IN BREECH RING AND BREECH BLOCK PRODUCTION AS A RESULT OF SUCCESSFUL COMPLETION OF THIS PROJECT.

6 79 7555

DYNAMIC PRESSURIZATION STAND, SLIDE BLOCK BREECH MECH

THE INSTRUMENTATION PACKAGE WAS ACCEPTED. THE SYSTEM WAS INCORPORATED INTO THE PRODUCTION LINE JANUARY 1982. THE ASSEMBLY OF THE DYNAMIC PRESSURIZATION STAND WAS COMPLETED IN OCT 1982.

6 77 7714

MULTI-MODE WEAPON + MOUNT IMPEDANCE SIMULATOR (CAM)

THIS PROJECT IS COMPLETE. A SECOND GENERATION WEAPON-MOUNT SIMULATOR WAS DESIGNED, FABRICATED, AND TESTED. THIS SIMULATOR CAN DUPLICATE THE REQUIRED SPRING RATES AND DAMPING RATIOS FOR WEAPONS 50 CALIBER TO 30MM.

6 79 7807

PROGRAMMED OPTICAL SURFACING EQUIPMENT AND METHODOLOGY (CAM)

A BOSTOMATIC CNC MILLING MACHINE HAS BEEN ADAPTED FOR GRINDING + POLISHING OF OPTICAL SURFACES-(ALL ON ONE MACHINE). IN ADDITION A MILLING MACHINE INTERPRETIVE LANGUAGE, WHICH PERMITS COMPLEX MOVEMENTS OR WHOLE OPERATIONS.

6 80 7920

CONSERVATION OF CRITICAL MATERIALS FOR GUN TUBES

THIS PROJECT IS COMPLETED. HEAT TREAT PARAMETERS HAVE BEEN DEVELOPED FOR 105MM M68 FORGINGS. EIGHT 105MM M68 FORGINGS WERE SUCCESSFULLY HEAT TREATED. SPECIFICATIONS RESULTING FROM PROJECT ARE USED TO PROCURE MATERIAL FOR THE ROTARY FORGE.

FINAL STATUS REPORTS RECEIVED DURING 2ND HALF, CY82
(CONTINUED)

6 80 7925

BORE EVACUATOR BORING

AN IMPROVED BORE EVACUATOR MACHINING CENTER WAS DEVELOPED BY COMBINING TWO PLANETARY MILLS ON A SPECIALLY CONSTRUCTED MACHINE BASE. SAVING IS ESTIMATED TO BE NEARLY 100 DOLLARS ON THE 105MM M68 BORE EVACUATOR.

6 80 7926

HOT ISOSTATIC PRESSING (HIP) OF LARGE ORDNANCE COMPONENTS

FULL SIZED BREECH BLOCKS IN NEAR-NET SHAPE WERE PRODUCED BY HIPPING LOW ALLOY STEEL POWDER. THE BREECH BLOCK PREFORMS WILL BE EVALUATED IN THE FOLLOW-ON FY82 PROJECT.

6 80 7927

GENERATION OF BASE MACHINING SURFACES

THIS IS THE FIRST YEARS EFFORT THAT DEVELOPED AN ENGINEERING SPECIFICATION AND EVAL. THE TECHNICAL PROPOSALS FOR THE MAJOR EQUIPT. THE FOLLOW-ON PROGRAM FUNDED THE ACTUAL PROCUREMENT, INSTALLATION, TESTING AND IMPLEMENTATION.

6 80 7928

ROBOTIZED BENCHING OPERATIONS (CAM)

THE PROJECT OFFICER PARTICIPATED IN A PRE-AWARD AT ESI + HENDERSON INDUSTRIES. IN EACH CASE AWARD WAS RECOMMENDED. AT PRESENT IT IS PROJECTED THAT 80 PERCENT OF THE WORK WILL BE DONE AT HENDERSON INDUSTRIES.

6 81 7940

SYNERGISTIC PLATINGS WITH INFUSED LUBRICANTS

DURING THIS PROJECT POROUS NICKEL PLATING WAS COMBINED WITH NICKEL-PHOSPHOROUS ALLOY ELECTRODEPOSITION. THIS DATA SHOWED THAT POROUS COATINGS PLATED AND IMPREGNATED HAVE THE CAPABILITY FOR EXTENDED LIFE IN LOAD BEARING APPLICATIONS.

6 80 7948

ESTABLISH CUTTING FLUID CONTROL SYSTEM

ALL PROJECT WORK HAS BEEN COMPLETED AND A FINAL TECHNICAL REPORT HAS BEEN PUBLISHED AND DISTRIBUTED TO MANUFACTURING AND PRODUCTION SUPPORT PERSONNEL AT RIA AND TO ALL INTERESTED ORGANIZATIONS WITHIN DOD.

FINAL STATUS REPORTS RECEIVED DURING 2ND HALF, CY82
(CONTINUED)

6 79 7963

GROUP TECHNOLOGY FOR FIRE CONTROL PARTS AND ASSEMBLIES

A PILOT GROUP TECHNOLOGY SYSTEM FOR FIRE CONTROL MACHINED PARTS WAS COMPLETED. A MICROCOMPUTER GROUP SCHEDULING PROGRAM WAS DEVELOPED. A FINAL TECHNICAL REPORT IS AVAILABLE.

6 81 7966

MANUFACTURE OF TRITIUM POWERED RADIO-LUMINOUS LAMPS

RECEIVED SAMPLES FROM FOUR DIFFERENT CONTRACTORS. INITIAL BRIGHTNESS MEASUREMENTS AND GAS SAMPLING INDICATE A HIGH QUALITY OF MANUFACTURE. ADDITIONAL ANALYSIS AND CHARACTERIZATION WILL BE CONDUCTED UNDER 6827966.

6 81 7990

IMPROVED FABRICATION AND REPAIR OF ANODES

THIS PROJECT IS COMPLETED. TWO TOTALLY AUTOMATED LEAD PLATING OPERATIONS HAVE BEEN COMPLETED. A PROCESS AND PROCEDURE GUIDE HAS BEEN WRITTEN DESCRIBING TOP REQUIREMENTS FOR THE AUTOMATIC LEAD ANODE PLATING FACILITY.

6 81 8001

RAPID FLOW PLATING OF SMALL CALIBER GUN TUBES

THIS PROJECT IS COMPLETED. SMOOTH, ADHERENT CHROMIUM CAN BE ELECTROPLATED INSIDE THE BORE OF 50-CALIBER GUN BARRELS BY THE RAPID FLOW PLATING PROCESS. THE RATE OF DEPOSITION WAS ABOUT 15 TIMES THAT FOR CONVENTIONAL PLATING.

6 79 8025

ELECTRONIC PROFILE READOUT GAGE FOR POWDER CHAMBER CONTROLS

THIS PROJECT IS COMPLETE. A TECHNICAL REPORT IS AVAILABLE.

6 80 8054

OPTICAL SCRATCH AND DIG STANDARDS FOR FIRE CONTROL SYSTEMS

DECILOG ESTABLISHED THE INITIAL DESIGN PARAMETERS FOR THE S+D STANDARDS BASED ON SCRATCH SCATTERING PHENOMENA STUDY BY NBS. EVALUATION OF MANUFACTURING TECHNOLOGIES RESULTED IN RECOMMENDATION THAT E-BEAM LITH BE USED TO MAKE THE PHOTO LITH MASK.

FINAL STATUS REPORTS RECEIVED DURING 2ND HALF, CY82
(CONTINUED)

6 80 8060

IMPROVED MFG PROCESSES FOR FINAL INSPECTION OF CANNON TUBES

THIS PROJECT WAS CANCELLED DUE TO CHANGES IN THE MANUFACTURING LINE WHICH MADE THE IMPLEMENTATION OF THE PROJECT RESULTS NOT ECONOMICALLY FEASIBLE. THE REMAINING \$300K WAS WITHDRAWN FROM THE PROJECT.

6 81 8080

HIGH SPEED FABRICATION OF ASPHERIC OPTICAL SURFACES

REQUIREMENTS FOR HIGH SPEED TUBULAR GRINDING + POLISHING PROCESSES FOR ASPHERIC SURFACES WERE DEFINED. SCOPE OF WORK WAS BEGUN. GOAL WAS TO IMPROVE PHOTO-OPTIC TRANSMISSION + REDUCE COST. PROJECT WAS CANCELLED AFTER HIGH BIDS WERE RECEIVED FROM RFP.

6 82 8080

HIGH SPEED FABRICATION OF ASPHERIC OPTICAL SURFACES

FOLLOW-ON TO ABOVE. VALIDATION WAS PLANNED BY MANUFACTURING NEW ASPHERIC ELEMENTS. REDESIGN OF AN OPTICAL FIRE CONTROL SYSTEM USING ASPHERIC ELEMENTS WAS SCHEDULED. SOW WAS COMPLETED + RFP ISSUED. ALL BIDS WERE EXCESSIVE + THE PROJECT WAS CANCELLED.

6 81 8120

ADAPTIVE CONTROL TECHNOLOGY (CAM)

THIS PROJECT IS COMPLETE. IT WAS DETERMINED THAT THE ENERGY ADAPTIVE GRINDING PROCESS SHOULD BE USED AT WATERVLIT ARSENAL.

6 80 8209

PILOT PRODUCTION OF GRADIENT INDEX OPTICS

WORK CONTINUES UNDER 6 81 8209. AXIAL GRADIENT INDEX OPTICS WILL BE FABRICATED AND RETROFITED INTO AN EXISTING SIGHT + COMPARED WITH THE CONVENTIONAL SIGHT. THE DESIGN AND RAY TRACE ANALYSIS HAS BEEN DONE AND VERIFIED. 6 ELEMENT DESIGN REDUCED TO 3.

6 80 8342

KEYWAY MILLING MACHINE

A TECHNICAL SPEC FOR A SPECIAL KEYWAY MILLING MACHINE WAS DEVELOPED. PROPOSALS BASED ON THIS SPEC WERE FOUND TO BE TOO COSTLY AND PROCUREMENT ACTION WAS TERMINATED. KEYWAY MILLING IS A MAJOR COST FACTOR. OTHER APPROACHES WILL BUILD ON THESE FINDINGS.

FINAL STATUS REPORTS RECEIVED DURING 2ND HALF, CY82
(CONTINUED)

TSARCOM

7 82 8190

IMPRVD CUTTER LIFE, T-700 COMP BLISK/IMPELLER MILLING OPER

CUTTING TESTS WITH CABOLDY 833 INDICATE TOOL MAY BE
INCREASED BY INCREASING PRIMARY AND SECONDARY CLEARANCE
ANGLES AND INCREASING PRIMARY LOAD WIDTH. INCREASING HELIX
ANGLE OR RAKE ANGLE DECREASED THE TOOL LIFE.

TOTAL PROJECTS COMPLETED IN 2ND HALF, CY82 111

MMT PROGRAM

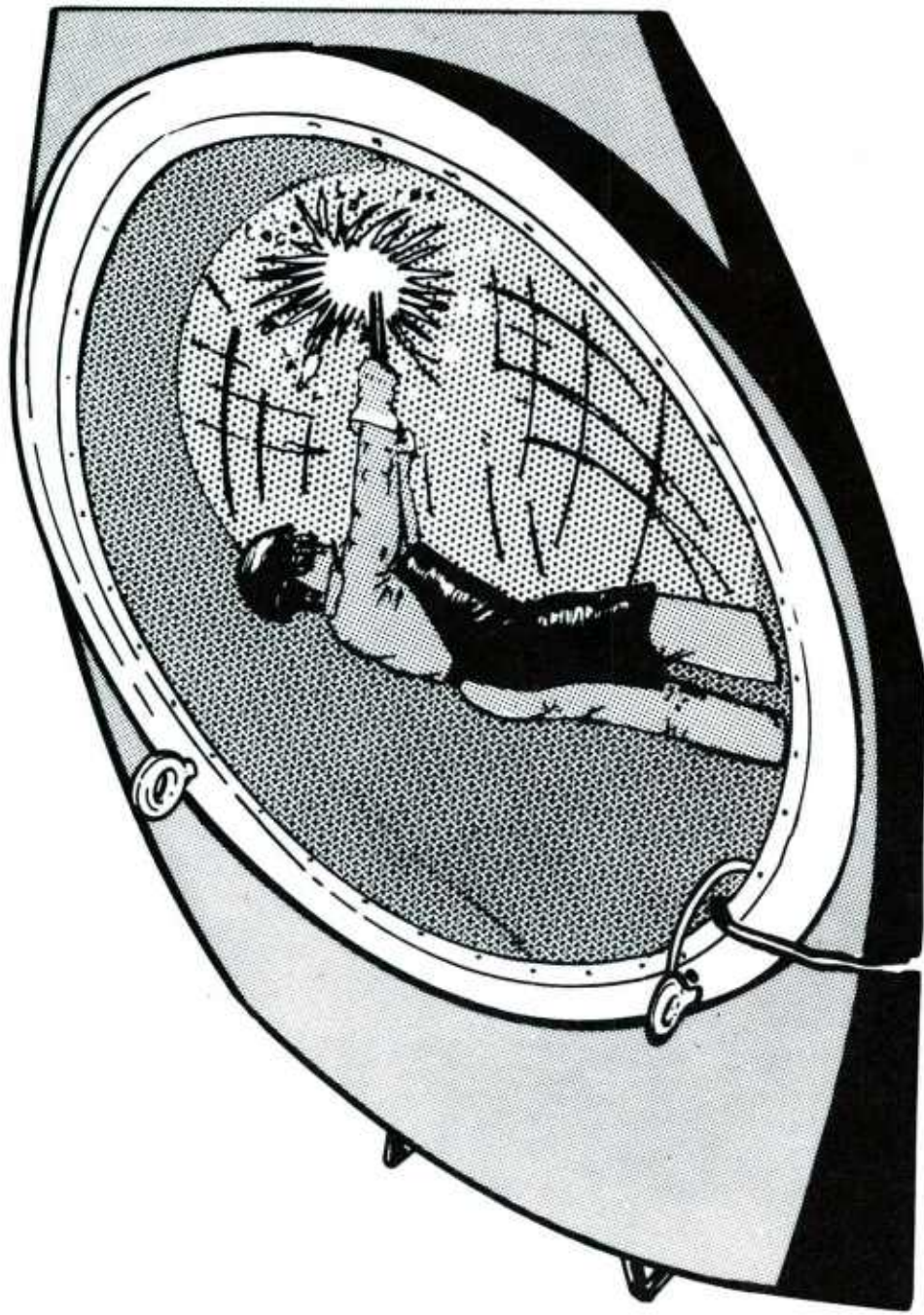
SUMMARY PROJECT STATUS REPORT



MANUFACTURING METHODS AND TECHNOLOGY PROGRAM

SUMMARY PROJECT STATUS REPORT

The Summary Project Status Report for each major Army subcommand (SUBMACOM) is preceded by the tabulated SUBMACOM MMT project funding status. The accuracy of funding amounts is based on the individual project status reports. The status as reported here is the IBEA condensation of information contained in the report or other comments as deemed useful. If a status report was not provided, a pertinent comment was made so that the project would be printed.



**DEPOT SYSTEMS COMMAND
(DESCOM)
AND
MANAGEMENT ENGINEERING TRAINING ACTIVITY
(AMETA)**

AMETA AND DEPOT SYSTEMS COMMAND

CURRENT FUNDING STATUS, 2ND CY82

FISCAL YEAR	NO. OF PROJECTS	AUTHORIZED FUNDS (\$)	* * C O N T R A C T A L L O C A T E D (\$)	* * F U N D I N G E X P E N D E D (\$)	* * I N H O U S E R E M A I N I N G (\$)	* * F U N D I N G E X P E N D E D (\$)
77	1	383,000	383,000	270,000 (70%)	0	0 (0%)
77	0	0	0	0 (0%)	0	0 (0%)
78	1	870,000	743,000	543,000 (73%)	127,000	127,000 (100%)
79	1	495,000	387,800	244,800 (63%)	107,200	107,200 (100%)
80	1	460,000	432,000	193,100 (44%)	28,000	28,000 (100%)
81	3	1,451,000	517,000	182,700 (35%)	934,000	37,000 (3%)
82	7	1,815,000	497,000	237,000 (47%)	1,318,000	20,000 (1%)
TOTAL	14	5,474,000	2,959,800	1,670,600 (56%)	2,514,200	319,200 (12%)

AUTHORIZED FUNDING

CONTRACT ALLOCATED 54%

INHOUSE REMAINING 45%

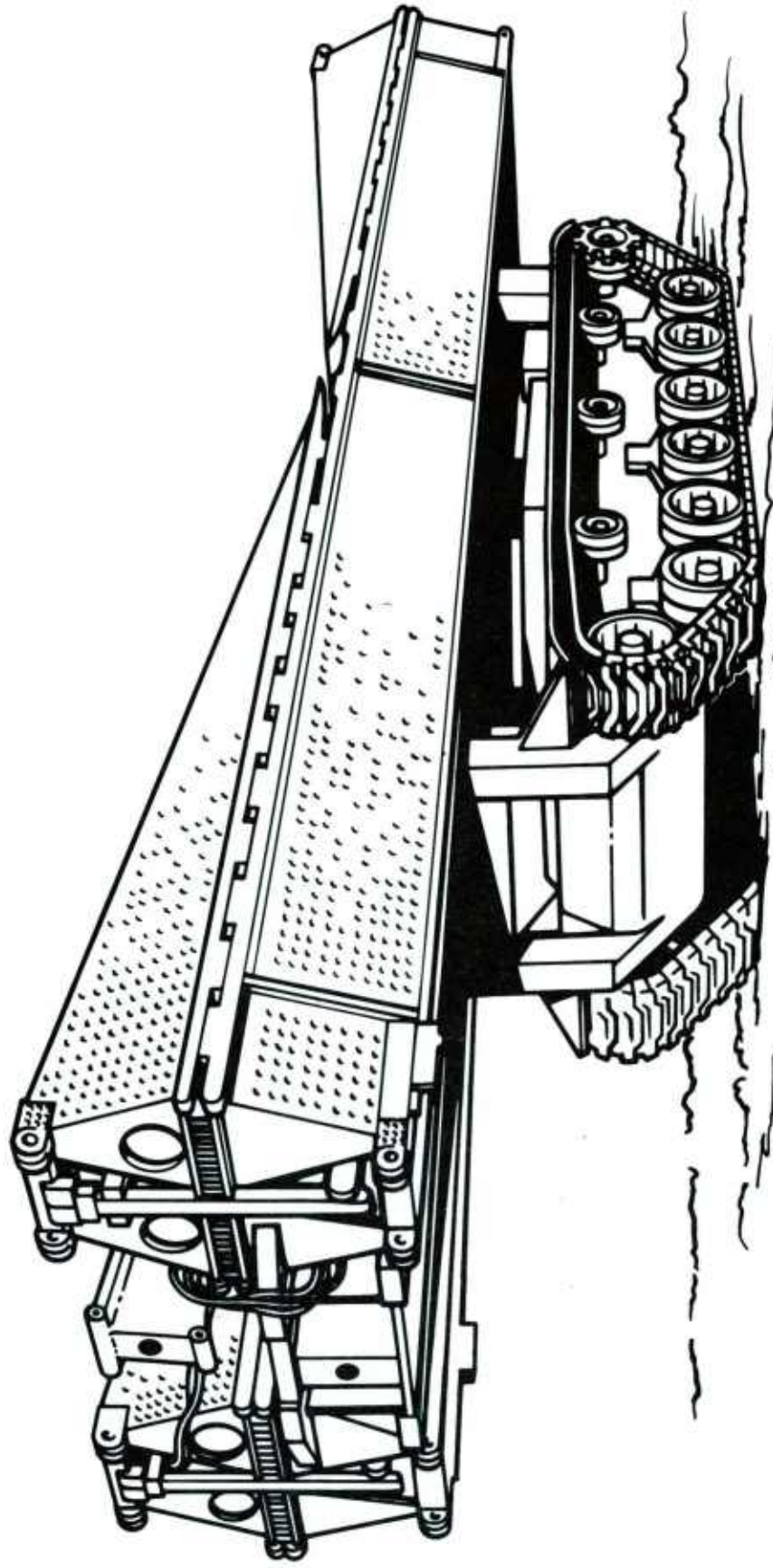
MANUFACTURING METHODS AND TECHNOLOGY PROGRAM
SUMMARY PROJECT STATUS REPORT
2ND SEMI-ANNUAL SUBMISSION CY 82 RCS DRCMT-301

PROJ NO. TITLE + STATUS

PROJ NO.	TITLE + STATUS	AUTHO- RIZED (\$000)	CONTRACT VALUES (\$000)	EXPENDED LABOR AND MATERIAL (\$000)	ORIGINAL PROJECTED COMPLETE DATE	PRESENT PROJECTED COMPLETE DATE
4 7T 5052	ARMY ENGINEERING DESIGN HANDBOOK FOR PRODUCTION SUPPORT CONTINUED WORK ON 706-100, DESIGN GUIDE FOR PRODUCTIBILITY-- 706-158, AND 159, DYNAMICS FOR BALLISTIC IMPACT, PART I + II-- AND 706-199, DEVELOPMENT GUIDE FOR RELIABILITY, PART 5, CONTRACTING FOR RELIABILITY. WORK ON 706-100 USED LATER FUNDS.	383.0	383.0		JUN 78	MAR 81
D 7B 5052	ARMY ENGINEERING DESIGN HANDBOOK FOR PRODUCTION SUPPORT WORK ON 706-203 HAS BEEN DELAYED DUE TO DIFFICULTY IN FINDING A SUBCONTRACTOR WHO CAN MEET REQUIREMENTS.	870.0	743.0	127.0	NOV 79	JAN 82
D 79 5052	ARMY ENGINEERING DESIGN HANDBOOKS FOR PRODUCTION SUPPORT THE UNACCEPTABLE CHAPTERS HAVE BEEN GIVEN TO PLASTEC (ARRAOCOM) TO REWRITE, AND THEY HAVE FINISHED FDM ON BOTH CHAPTERS. WORK ON 706-203 HAS BEEN DELAYED DUE TO DIFFICULTY IN FINDING A SUBCONTRACTOR WHO WILL MEET REQUIREMENTS.	495.0	387.8	107.2	MAY 83	MAY 83
D 80 5052	ARMY ENGINEERING DESIGN HANDBOOKS FOR PRODUCTION SUPPORT WORK ON 706-480 PRELIM. FINAL DRAFT MANUSCRIPT CONTINUED. WORK ON 706-177 FINAL DRAFT MANUSCRIPT CONTINUING AT ARRAOCOM. DELAYS EXPERIENCED IN GETTING TECHNICAL WORK GROUPS TO FINALIZE OUTLINE FOR 706-123, 706-210, AND 706-XXX.	460.0	432.0	28.0	JAN 83	JAN 83
D 81 5052	ARMY ENGINEERING DESIGN HANDBOOKS FOR PRODUCTION SUPPORT WORK CONTINUING ON HANDBOOKS STARTED WITH PRIOR YEAR FUNDS. DELAY EXPERIENCED IN GETTING TECHNICAL WORK GROUP TO FINALIZE REVISED OUTLINE FOR 706-245.	531.0	392.0	37.0	JAN 84	JAN 84
D 82 5052	ARMY ENGINEERING DESIGN HANDBOOKS FOR PRODUCTION SUPPORT WORK CONTINUING ON HANDBOOKS STARTED WITH PRIOR YEAR FUNDS. TECHNICAL WORKING GROUPS (TWG) BEING FORMED FOR 706-160, -170 + -410, AND TWG. PREPARED OUTLINE FOR 706-120 + 481. RFP ISSUED FOR SUBCONTRACTOR ON -120.	580.0	497.0	18.0	SEP 83	SEP 83

S U M M A R Y P R O J E C T S T A T U S R E P O R T
MANUFACTURING METHODS AND TECHNOLOGY PROGRAM
2ND SEMI-ANNUAL SUBMISSION CY B2 RCS DRCMT-301

PROJ NO.	TITLE + STATUS	AUTHO- RIZED (\$000)	CONTRACT VALUES (\$000)	EXPENDED LABOR AND MATERIAL (\$000)	ORIGINAL PROJECTED COMPLETE DATE	PRESENT PROJECTED COMPLETE DATE
G B2 2001	PROVIDE PROTOTYPE ROBOTS FOR AUTOMATED BLAST CLEANING A REVISED SOM INCORPORATING CORRECTIONS + ADDITION PER LEAD CONTRACTING OFFICIALS. ALSO, THE TOTAL SYS. ENGINEERING WAS FULLY DEVELOPED AND WILL BE USED AS EVALUATION CRITERIA. SSB EVALUATION PROCEDURES ARE BEING DEVELOPED.	162.0		2.0	SEP 84	SEP 84
G B2 2002	LONG RANGE DEPUT PRODUCTIVITY IMPROVEMENT PROGRAM ***** DELINQUENT STATUS REPORT *****	100.0				
G B1 4002	ROBUTIZED WELDING OF M113A2 SUSPENSION RFP FOR PURCHASE OF ROBOTS HAS BEEN RE-ISSUED. SIX PROPOSALS HAVE BEEN RECEIVED AND ARE BEING EVALUATED.	795.0			SEP 81	DEC 83
G B2 4002	ROBUTIZED WELDING OF M113A2 SUSPENSION ***** DELINQUENT STATUS REPORT *****	374.0				
G B2 4004	AUTOMATED DISASSEMBLY OF DOUBLE PIN TRACK THE FIRST STEP RESPONSE OF A TWO-STEP PROCUREMENT HAS BEEN RECEIVED AND IS BEING REVIEWED. THE NEXT REQUIREMENT WILL BE ISSUED BY PROCUREMENT IN FEB 83 FOR FINALIZING THE PROPOSALS.	299.0			SEP 83	FEB 83
G B1 4005	WATER JET MATERIAL REMOVAL SYSTEM A CONTRACT FOR THE DESIGN AND FABRICATION OF A WATER JET SYSTEM WAS AWARDED TO DAEDALEAN ASSOCIATES, INC. ON 20 SEPT 82. SYSTEM SHOULD BE DELIVERED AND INSTALLED BY 30 APR 83.	125.0	125.0		MAR 82	FEB 83
G B2 4005	WATER JET MATERIAL REMOVAL SYSTEM PHASE II ***** DELINQUENT STATUS REPORT *****	200.0				
G B2 8001	ANNISTON PRODUCTIVITY IMPROVEMENT PROGRAM SUPPORTING MATERIALS AND STATEMENTS OF WORK ARE BEING DEVELOPED IN PREPARATION FOR THE AWARD OF A CONTRACT.	100.0			SEP 83	SEP 83



**MOBILITY EQUIPMENT
RESEARCH AND DEVELOPMENT COMMAND
(MERADCOM)**

MOBILITY EQUIPMENT RESEARCH AND DEVELOPMENT COMMAND

CURRENT FUNDING STATUS, 2ND CY82

FISCAL YEAR	NO. OF PROJECTS	AUTHORIZED FUNDS (\$)	* * C O N T R A C T A L L O C A T E D (\$)	* * F U N D I N G E X P E N D E D (\$)	* * I N H O U S E R E M A I N I N G (\$)	* * F U N D I N G E X P E N D E D (\$)
79	3	1,873,500	1,750,000	1,679,000 (95%)	123,500	134,300 (108%)
80	2	279,000	165,700	112,200 (67%)	113,300	99,300 (87%)
81	3	735,000	607,000	506,000 (83%)	128,000	105,300 (82%)
82	2	1,173,000	997,300	184,200 (18%)	175,700	47,800 (27%)
TOTAL	10	4,060,500	3,520,000	2,481,400 (70%)	540,500	386,400 (71%)
AUTHORIZED FUNDING		CONTRACT ALLUCATED 87%		INHOUSE REMAINING 13%		

S J M M A R Y P R O J E C T S T A T U S R E P O R T
2ND SEMIANNUAL SUBMISSION CY 82 RCS DRCMT-301

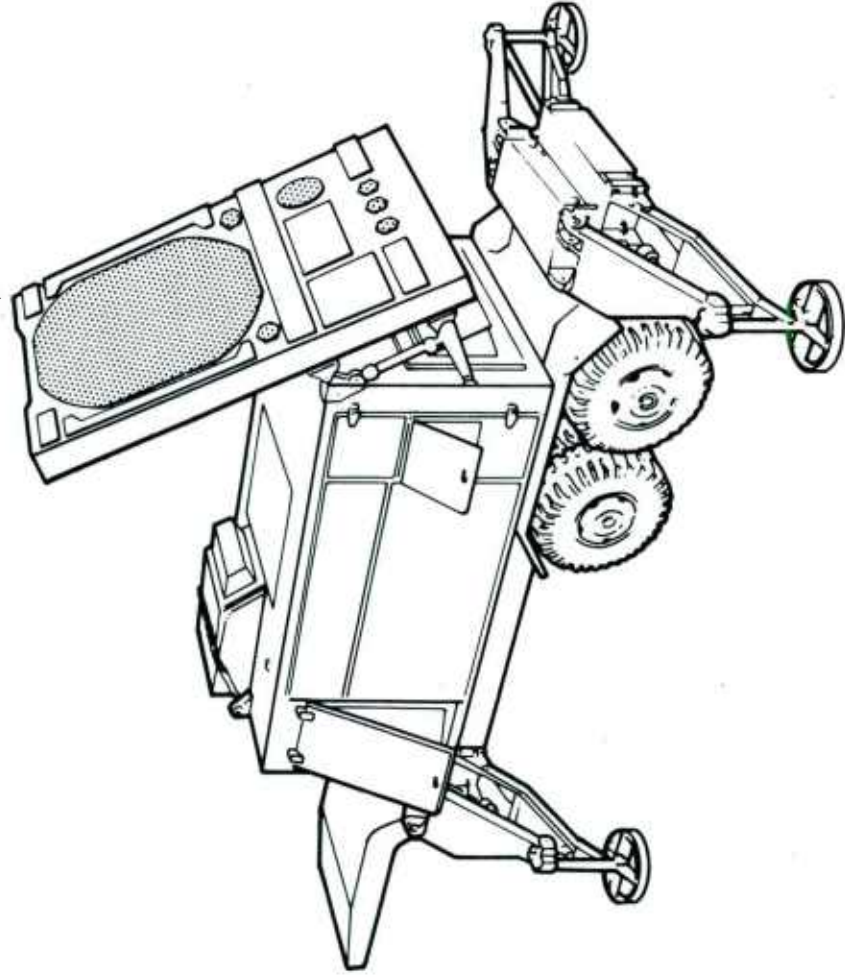
PROJ NO. TITLE + STATUS

PROJ NO.	TITLE + STATUS	AUTHO- RIZED (\$000)	CONTRACT VALUES (\$000)	EXPENDED LABOR AND MATERIAL (\$000)	ORIGINAL PROJECTED COMPLETE DATE	PRESENT PROJECTED COMPLETE DATE
E 79 3532	MOLTEN SALT LITHIUM-CHLORIDE BATTERY PROTOTYPE CELLS BUILT FOR A 30-CELL 12MMH 36V BATTERY CONTINUE TO SHOW EXCELLENT LIFE CYCLE CHARACTERISTICS. AVERAGE OF 370 CYCLES THUS FAR. SELECTION OF 30 CELLS FOR MERADCOM BATTERY COMPLETED. CELL DATA INDICATE EXCELLENT CHANCE OF ACHIEVING 300 CYS	295.0	280.0	15.0	AUG 80	SEP 83
E B2 3592	IMPROVED GRAPHITE REINFORCEMENT OPTIMIZATION OF THE OXIDATION AND CARBONIZATION PROCESSES IS COMPLETE. TENSILE PROPERTIES WERE SHOWN INSENSITIVE TO OXYGEN CONTENT OF THE FIBER BUT THEY WERE IMPROVED BY HIGHER CARBONIZATION RATES.	257.0	231.5	7.7	SEP 84	SEP 84
E 80 370B	COATED FABRIC COLLAPSIBLE FUEL TANK PROGRAM - CIRCULAR SEAML SEAMLESS FABRICS COATED AT CONTRACTORS FACILITIES. COATING OPERATION ACCOMPLISHED WITH DIFFICULTY. COATED SLEEVES FABRICATED INTO TANKS. MOUNTING OF PATCHES FOR HARDWARE AND SEALING OF END SEAMS PROCEEDED SLOWLY BUT SATISFACTORILY. TESTING BEGUN.	100.0	27.2	72.8	SEP 81	SEP 83
E 79 3709	CONTINUOUS LENGTH FUEL HOSE ALL WORK HAS BEEN TERMINATED. CONTINUOUS LENGTH FUEL HOSE IS NOW AVAILABLE COMMERCIALY AT CONSIDERABLY LOWER PRICES THAN PREVIOUSLY USED HOSEING. A FINAL TECHNICAL REPORT IS BEING PREPARED.	245.0	175.0	65.3	SEP 81	MAR 83
E 80 3709	CONTINUOUS LENGTH FUEL HOSE ALL WORK HAS BEEN TERMINATED. CONTINUOUS LENGTH FUEL HOSE IS NOW AVAILABLE COMMERCIALY AT CONSIDERABLY LOWER PRICES THAN PREVIOUSLY USED HOSEING. A FINAL TECHNICAL REPORT IS BEING PREPARED.	179.0	138.5	26.5	SEP 83	MAR 83
E 81 3717	HIGH TEMPERATURE TURBINE NOZZLE FOR 1D KW POWER UNIT ENGINE TEST SETUP WAS FINALIZED, BUT SCHEDULE HAS BEEN DELAYED BY TEMPORARY NON-AVAILABILITY OF PILOT PRODUCTION SHROUDS DUE TO TOLUOLN PROCUREMENT PROBLEMS.	422.0	322.0	100.0	APR 82	SEP 83
E 79 3743	COMPOSITE SPUN MATERIAL LAUNCHING BEAM FOR BRIDGES TECHNICAL WORK HAS BEEN COMPLETED. THE TOTAL EFFORT CONTINUES AS PROJECT E813743.	1,333.5	1,295.0	54.0	SEP 80	SEP 82
E 81 3743	COMPOSITE SPUN MATERIAL LAUNCHING BEAM FOR BRIDGES NEARLY COMPLETE. RAMPS, CENTER SECTIONS, CONNECTOR PANELS + ROTATING LINKS HAVE BEEN WOUND + CURED. BUNDING OF METALLICS NOT YET DONE. ALL FABRICATED ITEMS WILL BE DELIVERED WITHIN 2QFY82.	100.0	87.0		JAN 82	MAR 83
E 81 3759	KEVLAR CABLE REINFORCEMENT FOR MILITARY BRIDGES R+D PHASE COMPLETE. T-300 GRAPHITE/EER 324 EPOXY WAS SELECTED. FIBER SLIPPAGE AND PLACEMENT PROBLEMS WERE RESOLVED. CIRCULAR RACE TRACK WINDING PATTERN WAS SELECTED. MMT WORK WILL BEGIN IN JAN 83 AND END IN MAY 83.	213.0	198.0	5.0	MAY 82	MAY 83

MANUFACTURING METHODS AND TECHNOLOGY PROGRAM
 S J M A R Y P R O J E C T S T A T U S R E P O R T
 2ND SEMI-ANNUAL SUBMISSION CY 82 RCS DRGMT-301

PROJ NO.	TITLE + STATUS	AUTHO- RIZED	CONTRACT VALUES (\$000)	EXPENDED LASDR AND MATERIAL (\$000)	ORIGINAL PROJECTED COMPLETE DATE	PRESENT PROJECTED COMPLETE DATE

E 82 3796	COMBAT VEHICLE DEGAUSSING MAGNETIC SIGNATURE DATA WAS TAKEN FOR THE M1 AND M60 TANKS AND SAMPLES OF THE MATERIALS WERE MADE AVAILABLE TO THE CONTRACTOR. PRELIMINARY DATA INDICATES THAT THE PHILOSOPHY OF USING THE TRIDENT FACILITY AS A MODEL IS VALID.	916.0	765.8	40.1	AUG 83	DEC 85
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**ELECTRONICS
RESEARCH AND DEVELOPMENT COMMAND
(ERADCOM)**

ELECTRONICS R + O COMMAO

CURRENT FUNDING STATUS, 2ND CY82

FISCAL YEAR	NO. OF PROJECTS	AUTHORIZED FUNDS (\$)	* * C D N T R A C T ALLDCATED (\$)	* * F U N D I N G EXPENDEO (\$)	* * I N H O U S E REMAINING (\$)	* * F U N D I N G EXPENDEO (\$)
76	2	431,700	394,900	349,700 (88%)	36,800	35,000 (95%)
77	0	0	0	0 (0%)	0	0 (0%)
77	4	4,382,800	4,186,200	3,952,800 (94%)	196,600	197,000 (100%)
78	3	2,960,800	2,677,000	2,497,500 (93%)	283,800	283,800 (100%)
79	7	5,134,800	4,697,600	3,553,100 (75%)	437,200	418,400 (95%)
80	9	5,931,000	4,454,700	3,262,900 (73%)	1,476,300	1,002,700 (67%)
81	8	5,454,700	4,938,200	3,930,300 (79%)	516,500	314,200 (60%)
82	8	5,266,100	4,330,900	695,100 (16%)	935,200	117,400 (12%)
TOTAL	41	29,561,900	25,679,500	18,241,400 (71%)	3,882,400	2,368,500 (61%)
AUTHORIZED FUNDING		CONTRACT ALLDCATED 87%		INHOUSE REMAINING 13%		

S U M M A R Y P R O J E C T S T A T U S R E P O R T
MANUFACTURING METHODS AND TECHNOLOGY PROGRAM
2ND SEMI-ANNUAL SUBMISSION CY 82 RCS DRCMT-301

PROJ NO.	TITLE + STATUS	AUTHO- RIZED (\$000)	CONTRACT VALUES (\$000)	EXPENDED LABOR AND MATERIAL (\$000)	ORIGINAL PROJECTED COMPLETE DATE	PRESENT PROJECTED COMPLETE DATE
H 80 3010	MILLIMETER-WAVE SOURCES FOR 60, 94, AND 140 GHZ HUGHES IMPATT OSCILLATORS SHOWED NO EFFECT WHEN EXPOSED TO 10000 RAD/SI. PILOT PRODUCTION OF MMW IMPATTIS IS COMPLETED. MODULATOR TIMING + PULSEFORMING PROBLEMS OVERCOME. RESISTOR HEATING CAUSED CIRCUIT TO BE UNSTABLE. SOLUTION- MOUNT EXTERNAL TO CAN.	1,065.3	997.3	68.0	JUL 82	MAY 83
H 82 3011	INDIUM-PHOSPHIDE GUNN DEVICES VARIAN ASSOCIATES IS MECHANIZING THE THINNED INTEGRAL HEAT SINK PROCESS TO GET 10 MICROMETER DEVICE STRUCTURES. METALLIZATION + ALLOYING STEPS WERE COMBINED. SEM INSPECTION + PACKAGE ETCHING WERE ELIMINATED. IN-PROCESS MEASUREMENTS AID UNIFORMITY.	1,227.1	1,118.1	46.8	AUG 84	NOV 84
H 80 3012	INFRA-RED SOURCE FOR AN/ALQ-144 ***** DELINQUENT STATUS REPORT *****	351.9	321.9	30.0	JAN 81	JUN 83
H 80 3023	TUBULAR PLASMA PANEL NO ADDITIONAL WORK WAS REPORTED FOR THIS SEMI-ANNUAL PERIOD.	800.0	674.0	95.0	APR 82	JUN 83
H 80 3026	HIGH PRESSURE OXIDE IC PROCESS ET+D LABS ORDERED A MAJOR REVISION OF THE FURNACE TO REDUCE CONVECTION OF HOT GAS TO COLD VESSEL WALLS. NOW USE A CLOSED 8ELL-JAR TYPE CONTAINER AROUND THE FURNACE ELEMENTS. NEW PARTS WERE MADE AND FITTED INTO THE CHAMBER. TESTING TO START IN MARCH.	650.1		532.6	MAY 82	OCT 83
H 81 3031	10.6 UM CO-2 TEA LASERS RAYTHEON ESTABLISHED PRODUCTION METHODS FOR FURNING, SEALING + PROCESSING CERAMIC LASER HOUSINGS. WORKED ON ELECTRODES AND MIRRORS FOR ALIGNMENT + PARALLELISM. OPTIMIZED GAS MIXTURE. NEED POLARIZING ELEMENT IN LASER CAVITY + THIS LED TO COST GROWTH.	550.0	486.4	36.6	MAR 83	SEP 85
H 80 3501	THIRD GENERATION PHOTOCATHODE ON FIBER OPTIC FACEPLATE ITT HAS HAD TROUBLE GROWING GALLIUM-ARSENIDE LAYERS ON GALLIUM-ARSENIDE WAFERS TO MAKE 3RD GEN PHOTOCATHODES. ITT DEVELOPED A MULTI-FREQUENCY SCAN TEST TO CHECK LAYER THICKNESS. NV+EOI + ITT THINK THEY HAVE THE UNIFORMITY PROBLEM SOLVED.	572.4	492.4	78.5	MAR 82	DEC 83
H 81 3505	HIGH CONTRAST CRT PHOSPHOR DEPOSITION AND SEALING TECH. TRANSFER FROM LOCKHEED TO HUGHES ENABLED HUGHES TO FABRICATE FACEPLATES. THE HUGHES FACEPLATE HAS 3FOLD INCREASE IN RED LUMINANCE OVER LOCKHEED. REPRODUCIBILITY OF FACEPLATES IS HIGH. SPUTTER TARGET WAS RECEIVED AND IS SATISFACTORY.	375.6	349.6	0.8	OCT 82	NOV 83
H 82 3505	HIGH CONTRAST CRT PHOSPHOR DEPOSITION AND SEALING - PHASE II CONFIRMATORY CRT DELIVERY AND ACCEPTANCE IS PREREQUISITE TO RELEASE OF PHASE II FUNDS. FUNDING DECREASED FROM PHASE I IS ADDED TO PHASE II. DECREASE OF 1.2K AUTHORIZED FROM PHASE II.	260.8	229.8		JUN 83	NOV 83

S U M M A R Y P R O J E C T S T A T U S R E P O R T
2ND SEMIANNUAL SUBMISSION CY 82 RCS DKCMT-301

MANUFACTURING METHODS AND TECHNOLOGY PROGRAM

PROJ NO.	TITLE + STATUS	AUTHORIZED (\$000)	CONTRACT VALUES (\$000)	EXPENDED LABOR AND MATERIAL (\$000)	ORIGINAL PROJECTED COMPLETE DATE	PRESENT PROJECTED COMPLETE DATE
H 79 5000	PRODUCTION HOT FORGING OF ALKALI HALIDE LENSES HIGHLY SUCCESSFUL PROCESSES FOR PRESSING IR LENSES TO SHAPE HAVE BEEN DEVELOPED BY MONEYMILL. THE WATER IMPERMEABLE COATING EFFORT HAS NOT BEEN SUCCESSFUL SO IMPLEMENTATION OF THE INEXPENSIVE KBR LENS IS NOT FORESEEN. TEST METHOD IS VERY SUCCESSFUL.	591.0	541.0	50.0	SEP 81	FEB 83
H 82 5010	BONDED GRID ELECTRON GUN VARIAN COMPLETED COMPUTER ANALYSIS OF THE BORON NITRIDE ELECTRON GUNS BONDED GRID STRUCTURE. LASER MILLING EQUIPMENT WAS ORDERED. TECHNIQUES FOR PRODUCTION BONDING THE GRID TO THE CATHODE ARE UNDER EVALUATION. GUNS WILL OPERATE AT LESS THAN 1000 VOLT	852.5	763.7	34.9	MAR 84	DEC 84
H 82 5019	LASER-CUT SUBSTRATES FOR MICROWAVE TUBES CONTRACT AWARDED TO NORTROP. A SUCCESSFUL TWO STEP HIGH RESOLUTION ETCHING PROCESS WILL BE USED TO LASER MICRO MACHINE 18CFA ANODE CIRCUIT 8EO CERAMIC HEATSINK/MOUNT/INSULATOR.	849.0	390.6	9.9	MAR 83	NOV 84
H 81 5041	MILLIMETER WAVE MIXERS AND ARRAYS ALPHA IND. USED COMPUTER CONTROLS TO MAKE MMW SCHOTTKY BARRIER MIXER DIODES THAT MEET SPECS AT 56, 94 + 120 GHZ BUT NOT 140 GHZ. IMPEDENCE REDUCTION OF DOUBLE RIDGED MATCHING STRUCTURES INCORPORATED. SPLIT BLOCK HOUSING BROACHED AND EDMED.	575.9	495.0	71.8	JUL 83	DEC 84
H 79 5042	LARGE DIAMETER NEODYMIUM YAG LASER CRYSTAL BOULES LITTON SYSTEMS AIRTRON DIV. BUILT A NEW STATION FOR GROWING LARGER 2 INCH NEOLIUM DCPED YAG BOULES. 12 RODS WERE CUT + TESTED + PASSED. 30 RODS WERE PROMISED FOR FEB 83. THEY MAY BE USED IN GVS-5 RANGEFINDER. DEMO TO BE HELD IN MARCH 1983.	469.2	404.1	47.0	JUL 81	JUN 83
H 82 5109	PRECISION LO-COST SURF ACOUSTIC WAVE DELAY LINES-UHF APPL TRW IS OPTIMIZING FABRICATION + TEST PROCESSES FOR 403 + 506 MHZ UHF SURFACE ACOUSTIC WAVE DEVICES. FOUR MASK SETS WERE BUILT EACH WITH TRANSDUCER PAIRS. TD-8 PACKAGE WAS SELECTED. TEST FIXTURES WERE DESIGNED + SEMIAUTOMATIC ASSEMBLY EQUIP. BOUGHT.	596.0	500.7	9.0	MAY 85	MAR 84
H 81 5110	COMMON MODULE DETECTOR ARRAYS ***** DELINQUENT STATUS REPORT *****	955.0	825.0	50.0	JUN 82	JUN 83
H 80 5147	HI RESISTIVITY POLYCRYSTALLINE SILICON HEMLOCK SEMICON CORP MODIFIED THE TRICHLOROSILANE REACTOR FOR PRODUCTION OF 72 MM DIAMETER DETECTOR GRADE POLYSILICON. THEY MADE 330 KILOGRAMS OF POLYSILICON. VAPOR-PHASE PURIFICATION SYSTEM IS IN PROGRESS. THIS GIVES US A DOMESTIC SOURCE OF POLYSI.	430.0	382.0	38.0	SEP 82	MAY 83
H 81 5178	PROGRAM FOR A GRAPHITE/EPOXY ANTENNA REFLECTOR ***** DELINQUENT STATUS REPORT *****	681.0	681.0		APR 82	JUN 83

S U M M A R Y P R O J E C T S T A T U S R E P O R T
2ND SEMIANNUAL SUBMISSION CY 82 RCS DRCMT-301

MANUFACTURING METHODS AND TECHNOLOGY PROGRAM

PROJ NO.	TITLE + STATUS	AUTHO- RIZED (\$000)	CONTRACT VALUES (\$000)	EXPENDED LABOR AND MATERIAL (\$000)	ORIGINAL PROJECTED COMPLETE DATE	PRESENT PROJECTED COMPLETE DATE
H 82 5183	PRODUCTION OF LARGE DIAMETER SILICON FOR LASER SEEKERS HUGHES HAD DELAYS IN SPLIT HEATER COIL INSTALLATION ON WESTECH ZONER AT CARLSBAD, CA. HUGHES GREW 3 IN DIA BOULES OF LOW RESISTIVITY SILICON BUT NO HI RESISTIVITY SILICON. MARTIN-MARIETTA AGREED TO QUALIFY HUGHES + WACKER 3 IN SILICON F/ DETECTORS.	491.0	433.0	1.2	JAN 84	JAN 84
H 82 5193	PROCESS ADJUSTMENTS F/ENVIRON STRESS ON ELECT CIRCUIT METALS ***** DELINQUENT STATUS REPORT *****	21.0			JUN 83	
H 80 9563	MINATURE HIGH VOLTAGE POWER SUPPLYS FOR NIGHT VISION GOGGLES THE CONFIRMATORY SAMPLES WERE DELIVERED AND PILOT FABRICATION STARTED. THE MM+T VERSION OF THE POWER SUPPLY WILL BE IMPLEMENTED INTO K+M S REGULAR PRODUCTION LINE. END ITEM IS THE ANVIS POWER SUPPLY.	535.0	349.1	55.0	JUN 82	AUG 83
H 80 9588	THIRD GENERATION LOW COST IMAGE INTENSIFIER TUBES VARO DEMONSTRATED ADEQUATE TUBE STABILITY WHEN SUBJECTING PHOTOCATHODES TO HIGH LIGHT + HIGH TEMP LEVELS. SECOND ENG SAMPLES WERE RECEIVED OCT 82. ALL CONTRACT FUNDS WERE EXPENDED AND WORK STOPPED. VARO SPENT \$26K OF OWN FUNDS.	900.0	638.7	78.6	APR 83	DEC 83
H 81 9588	THIRD GENERATION LOW COST IMAGE INTENSIFIER TUBES LITTON RESOLVED HIGH SCREEN LEAKAGE + LOW CATHODE SENSITIVITY TUBE PROBLEMS. TUBE NONUNIFORMITY/BLEMISHES ARE BEING ADDRESSED BY PHOTOCATHODE SPIN ETCH PROCESS, TIGHTER INSPECTION, + MORE UNIFORM ELECTRON SCRUB. MOD WAS ISSUED TO ADD FUNDS + TIME.	1,051.0	945.0	106.0	JUN 84	MAR 84
2 76 9738	EPITAXIAL + METALLIZATION PROCESSES FOR GAAS IMPATT DIODES MACOM GA/AS PRODUCTS CO. DRAFTED THE FINAL REPORT AND IT HAS BEEN APPROVED. BUT DIFFERENCES IN PERFORMANCE IN DIODES MADE FROM DIFFERENT WAFERS RESULT FROM UNKNOWN VARIATIONS IN DEVICE PROCESSING. RESULTS CANNOT BE DUPLICATED FROM DIODE TO DIODE.	248.8	247.0		JUN 77	APR 83
H 78 9738	PULSED GALLIUM ARSENIDE IMPATT DIODES MACOM GA/AS PRODUCTS CO AUTOMATED THE GROWTH OF P AND N TYPE EPITAXIAL LAYERS SEQUENTIALLY IN THE SAME REACTOR. BUT DIODES MADE FROM DIFFERENT WAFERS SHOWED THE MATERIAL SPEC WAS NOT TIGHT ENOUGH. THERMAL EFFECTS FROM DIODE PROCESSING ARE A PROBLEM.	500.0	441.2	58.8	JUN 80	SEP 83
2 77 9754	CONTIN CYCLE PROC OF SHOCK RESISTANT QUARTZ CRYSTAL UNITS GEND COMPLETED QUARTZ CRYSTAL PILOT RUN. DEFICIENCIES DISCOVERED DURING TESTING WERE TRACED TO THE POLYIMIDE BOND AND TEST EQUIPMENT. THESE ARE NOW BEING CORRECTED. FINAL REPORT IS UNDER REVISION. CRYSTALS ARE USED IN COMMUNICATIONS + NAVIGATION.	2,156.8	2,093.8	63.0	DEC 79	MAY 83

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PROJ NO.	TITLE + STATUS	AUTHORIZED (\$000)	CONTRACT VALUES (\$000)	EXPENDED LABOR AND MATERIAL (\$000)	ORIGINAL PROJECTED COMPLETE DATE	PRESENT PROJECTED COMPLETE DATE
2 76 9766	DEPOSITION OF A HI VOLTAGE INSULATING LAYER FOR THICK FILMS ERIE TECHS NEW DESIGN FOR MINIATURE HIGH VOLTAGE HYBRID MULTIPLIER MODULES RESOLVED TECH PROBLEMS. BOTH CONFIRMATORY AND PILOT RUN SAMPLES DELIVERED TO GOVT WERE ACCEPTABLE. FEWER PARTS WILL RESULT IN LOWER COSTS. WORK IS COMPLETE EXCEPT FOR REPORT.	182.9	147.9	35.0	AUG 78	DEC 82
2 77 9805	AUTO MICROCIRCUIT BRIDGE PDN MEASURE OF QUARTZ CRYSTALS HUGHES DEVELOPED AN AUTOMATIC MICROCIRCUIT BRIDGE FOR MEASURING QUARTZ CRYSTAL PARAMETERS. SYSTEM WILL MEASURE 25 CRYSTALS PER DAY. RESULTANT TECHNIQUES WILL BE INCORPORATED INTO MIL-C-3098 SPECIFICATION. PROJECT IS COMPLETE EXCEPT FOR FINAL REPORT.	875.0	775.0	100.0	JAN 79	FEB 83
H 79 9805	QUARTZ CRYSTAL PARAMETER TESTING FOLLOW-ON TO ABOVE. HUGHES WILL INCREASE PREVIOUS SYSTEM CAPACITY FROM 25 TO 200 CRYSTALS/DAY. TEMP CYCLE WILL RANGE FROM -55 TO 150 DEGREES CELSIUS. CRYSTALS ARE USED IN TRANSMITTER/RECEIVER OSCILLATORS. PROJECT IS COMPLETE EXCEPT FOR FINAL REPORT.	725.0	685.0	40.0	JUN 80	APR 83
H 79 9807	PROCESSING HIGH STABILITY QUARTZ CRYSTAL UNIT PHASE 111 EFFORT AT GENO TO EXPAND CAPABILITY OF PILOT LINE TO 5 + 10 MHZ SC CUT CRYSTALS. POOR QUALITY SWEPT QUARTZ FORCED SHUT-DOWN OF CONFIRMATORY RUN. ALTERNATE SOURCE + IN-HOUSE CAPABILITY SHOULD ALLEVIATE PROBLEM. \$430K MIPR RECEIVED FROM AF.	1,470.9	1,412.9	58.0	MAR 81	NOV 84
2 77 9809	MEAS TECHNIQ FOR CHMICALS IN MFG PRUC FOR SOLID ST MICROW ***** DELINQUENT STATUS REPORT *****	632.0	625.0	7.0	NOV 78	JUN 83
H 79 9838	MINIATURE CATHODE RAY TUBES THE THIRD AND FINAL ENGINEERING SAMPLES WERE DELIVERED AND TESTED. PERFORMANCE TESTS WERE PASSED. QUALIFICATION AND ACCEPTANCE TESTS ARE DRAFTED. PROCESS SPECIFICATIONS ARE BEING PREPARED.	369.2	278.7	90.5	AUG 81	AUG 83
H 79 9844	CMOS CIRCUITS USING SILICON ON SAPPHIRE -SOS-TECHNOLOGY RUCKWELL AND UNION CARBIDE ARE IMPROVING THE QUALITY OF SILICON EPITAXIALLY GROWN ON SAPPHIRE WAFERS. UNION CARBIDE USES UV REFLECTANCE TO MONITOR THE GROWTH OF SILICON ON SAPPHIRE. USERS SAY THIS LEADS TO AN IMPROVEMENT IN SOS QUALITY FOR VLS+VHSIC.	770.0	686.4	82.9	NOV 81	APR 83
H 78 9860	PDN TECHQ-GALLIUM ARSENIDE MINIV FIELD EFFECT TRANSISTORS ALL PHASES OF PROJECT ARE COMPLETE AND ALL TECH PROBLEMS ARE SOLVED. FETS PASSED ALL SPECS THROUGH 12 GHZ. FETS WORKED TO 16 GHZ BUT NOT IN SPEC. PILOT LINE FETS COST \$15 UNPACKAGED AND \$50 PACKAGED. SCHEDULE SLIPPAGE CAUSED PROJ EXTENSION TO 3/83.	464.3	399.3	65.0	NOV 80	MAR 83

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2 77 9873	ANTENNA PATTERN MEASUREMENTS USING NEARFIELD TECHNIQUES ***** DELINQUENT STATUS REPORT *****	719.0	692.4	27.0	OCT 79	JUN 83
H 79 9877	LIGHT EMITTING DIODE ARRAY COMMON MODULE SPECTRONICS DEVELOPED A VAPOR PHASE EPITAXIAL REACTOR TO GROW GALLIUM ARSENIDE PHOSPHIDE (GAASP) ARRAY MATERIAL FOR LED COMMON MODULES. MODULE ASSEMBLY TECHNIQUES WERE IMPROVED + IMPLEMENTED ON THE PRODUCTION LINE. ALL CONTRACT GOALS WERE MET.	739.5	689.5	50.0	APR 81	DEC 82
H 78 9889	THIRD GENERATION 0.9 MICRON WAFER INTENSIFIER TUBE SEE TASKS A AND B BELOW.	1,996.5	1,836.5	160.0	JUN 81	MAR 83
H 78 9889 8	THIRD GENERATION 0.9 MICRON WAFER INTENSIFIER TUBE (VARIAN) ***** DELINQUENT STATUS REPORT *****	1,159.5	1,079.5	80.0	JUN 81	JUN 83
H 81 9889	18MM THIRD GENERATION 0.9 MICRON WAFER INTENSIFIER TUBE SEE TASKS A AND B BELOW.	461.0	443.0	17.5	JUN 83	MAR 83
H 81 9889 A	IMP 18MM 3RD GEN 0.9 MICRON WAFER INTENSIFIER TUBE (ITT) FOLLOW-ON TO H 78 9889A. ITT CORRECTED 3RD GEN IMAGE TUBE VEILING GLARE PROBLEM WITH GLASS BULLSEYE FACEPLATE. TUBE GAIN WAS ALSO INCREASED. TUBES ARE BUILT WITH GAAS PHOTOGRAPHY. FOUR TUBES HAVE EXCEEDED 2000 HR STANDARD RELIABILITY REQUIREMENTS.	202.0	193.0	8.5	JUN 83	MAR 83
H 81 9889 8	IMP 18MM 3RD GEN 0.9 MICRON WAFER INTENSIFIER TUBE (VARIAN) FOLLOW-ON TO H 78 9889B. VARIAN RESOLVED TUBE HIGH E81, PHOTOSENSITIVITY, EMISSIONS + SHADING PROBLEMS. FIVE TUBES COMPLETED THE ACCELERATED MODE 400 HR RELIABILITY TEST REQUIREMENTS. QUALITY CONTROL + YIELD DATA WILL BE USEFUL IN PROD. CONTRACT.	259.0	250.0	9.0	JUN 83	MAR 83
H 80 9897	SURFACE ACOUSTIC WAVE RESONATOR + REFLECTIVE ARRAY DEVICES REFLECTIVE ARRAY COMPRESSOR- DIFFICULTIES ARE BEING EXPERIENCED WITH DEVICE REPEATABILITY. SOME PASSIVE TESTS HAVE BEEN COMPLETED. SAW RESONATOR- THE SCOPE OF WORK WAS REDUCED DUE TO FUND SHORTAGES.	626.3	599.3	27.0	AUG 82	JUN 83
H 82 9905	LOW-COST MONOLITHIC GALLIUM ARSENIDE MICROWAVE INTEG CIRCUITS WESTINGHOUSE MADE FINAL MASK SETS BASED ON 1ST DESIGN ITERATION. MORE TEST DEVICES WERE ADDED TO THE MASKS TO GET MORE DESIGN TEST DATA. STABILITY AND NOISE ANALYSIS WERE STARTED, AS WAS PROCESS CONTROL. A HYBRID DESIGN WAS STARTED FOR COMPARISON.	968.7	895.0	15.6	SEP 84	SEP 84
H 81 9909	PRODUCTION TECHNIQUES FOR SILICON MM POWER TRANSISTORS ALL 30W 3.1 GHZ SI POWER TRANSISTORS IN 2ND ENG SAMPLE HAVE MET ALL SPECS EXCEPT 3.5PCT LOW IN EFFICIENCY + DYNAMIC RANGE. SPEC WILL BE LOWERED 5PCT. W/50PCT TAC YIELD, 300 6-CELL TRANSISTORS CAN BE MADE FROM A SINGLE WAFER. INCREASED FUNDING NEEDED.	805.2	713.2	31.5	SEP 83	DEC 83



**ARMY MATERIALS AND MECHANICS RESEARCH CENTER
(AMMRC)**

ARMY MATERIALS AND MECHANICS RESEARCH CENTER

CURRENT FUNDING STATUS, 2ND CY82

FISCAL YEAR	NO. OF PROJECTS	AUTHORIZED FUNDS (\$)	* *	C O N T R A C T A L L O C A T E D (\$)	* *	F U N D I N G E X P E N D E D (\$)	* *	I N H O U S E R E M A I N I N G (\$)	F U N D I N G E X P E N D E D (\$)	* *
78	1	0		0		0 (0%)		0	0 (0%)	
79	1	0		0		0 (0%)		0	0 (0%)	
80	1	4,323,300		1,633,700		0 (0%)		2,689,600	2,689,600 (100%)	
81	2	4,599,000		1,694,700		184,700 (10%)		2,904,300	2,889,300 (99%)	
82	1	4,573,000		2,280,800		0 (0%)		2,292,200	2,292,200 (100%)	
TOTAL	6	13,495,300		5,609,200		184,700 (3%)		7,886,100	7,871,100 (99%)	
AUTHORIZED FUNDING		CONTRACT ALLOCATED 42%		INHOUSE REMAINING 58%						

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PROJ NO.	TITLE + STATUS	AUTH- RIZED (\$000)	CONTRACT VALUES (\$000)	EXPENDED LABOR AND MATERIAL (\$000)	ORIGINAL PROJECTED COMPLETE DATE	PRESENT PROJECTED COMPLETE DATE
M 78 6350	MATERIALS TESTING TECHNOLOGY (MTT) SEE SUBTASKS BELOW FOR PROJECT STATUS.				JUN 79	DEC 84
M 78 6350 2200	SIZING AND COUNTING CONTAMINANTS IN RECOIL HYDRAULIC SEE PROJECT NO M 80 6350-2200 FOR STATUS.				APR 80	MAR 83
M 78 6350 2205	HOLOGRAPHIC INSPECTION OF ROTARY FORGED PREFORMS SEE PROJECT NO M 80 6350-2205 FOR STATUS.				NOV 80	JUN 83
M 78 6350 2206	OPTICAL DETERMINATION OF DIMENSIONAL GAPS ON TANK PROJECTILE SEE PROJECT NO M 81 6350-2206 FOR STATUS.				MAY 80	NOV 82
M 78 6350 2224	AUTOMATED ANTENNA PATTERN MEASUREMENT ***** DELINQUENT STATUS REPORT *****	45.0		45.0	DEC 79	JUN 83
M 78 6350 2235	ACOUSTIC EMISSION WELD MONITOR SEE PROJECT NO M 82 6350-2235 FOR PROJECT AND FUNDING STATUS.				NOV 79	DEC 84
M 78 6350 2245	NONDESTRUCTIVE EVALUATION OF CERAMIC MATERIALS SEE PROJECT NO M 82 6350-2245 FOR PROJECT AND FUNDING STATUS.				DEC 80	JUN 83
M 78 6350 2431	COMPUTERIZED COLOR MATCHING SYSTEM SEE PROJECT NO M 80 6350-2431 FOR STATUS.					DEC 82
M 78 6350 2642	APPLICATION OF RADIOGRAPHIC TESTING PROCEDURES SEE PROJECT NO M 81 6350-2642 FOR PROJECT AND FUNDING STATUS.				JUN 80	JAN 83
M 79 6350	MATERIALS TESTING TECHNOLOGY (MTT) SEE SUBTASKS BELOW FOR PROJECT STATUS.				OCT 80	APR 84
M 79 6350 2406	IMPROVED TEST METHODS FOR STRUCTURAL FOAM SEE PROJECT NO. M 81 6350-2406 FOR PROJECT AND FUNDING STATUS.					JUN 83
M 79 6350 2409	EMISSION SPECTROGRAPH ANALYZING STEEL PLASMA EXCITATION ***** DELINQUENT STATUS REPORT *****	215.0	13.5	176.5	MAR 80	JUN 83
M 79 6350 2418	HALF LIFE OF TRITIUM LAMPS SEE PROJECT NO M 81 6350-2418 FOR STATUS.				SEP 81	MAR 83
M 79 6350 2419	OBJECTIVE TECH + INSTR FOR INSPECT OF IR COMPONENTS SEE PROJECT M 81 6350-2419 FOR STATUS.				DEC 81	MAR 83
M 79 6350 2420	OPTICAL AND OIG STANDARDS AND MEASURING SYSTEM SEE PROJECT NO M 80 6350-2420 FOR STATUS.				DEC 80	MAR 83

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PROJ NO.	TITLE + STATUS	AUTHO- RIZED (\$000)	CONTRACT VALUES (\$000)	EXPENDED LABOR AND MATERIAL (\$000)	ORIGINAL PROJECTED COMPLETE DATE	PRESENT PROJECTED COMPLETE DATE
M 79 6350 2422	INSPECT/MEAS METHOD FOR SPHERICAL SURFACE COMPONENTS SEE PROJECT NO M 80 6350-2422 FOR STATUS.				MAR 81	JAN 83
M 79 6350 2431	COMPUTERIZED COLOR MATCHING SYSTEM SEE PROJECT NO M 80 6350-2431 FOR STATUS.					DEC 82
M 79 6350 2444	ULTRASONIC TESTING OF ROAD WHEELS SEE PROJECT NO M 80 6350-2444 FOR PROJECT AND FUNDING STATUS.				SEP 80	MAR 83
M 79 6350 2445	ULTRASONIC TIRE INSPECTION ***** DELINQUENT STATUS REPORT *****	85.0	57.3	0.2	DEC 80	JUN 83
M 79 6350 2450	GUN STEEL ADHESION CHROMIUM COATING MEASUREMENT SEE PROJECT NO M 80 6350-2450 FOR STATUS.					APR 84
M 79 6350 2453	THICKNESS MEASUREMENT OF NON-MAGNETIC COATINGS ***** DELINQUENT STATUS REPORT *****	83.0	47.6	17.4	DEC 80	JUN 83
M 79 6350 2642	APPLICATION OF RADIOGRAPHIC TESTING PROCEDURES SEE PROJECT NO M 81 6350-2642 FOR PROJECT AND FUNDING STATUS.					JAN 83
M 79 6350 2828	COMP MOTOR CASES ACOUSTIC EMISSION PROOF TEST DAMAGE EVAL SEE PROJECT NO M 81 6350-2828 FOR PROJECT AND FUNDING STATUS.					DEC 83
M 80 6350	MATERIALS TESTING TECHNOLOGY (MTT) SEE SUBTASKS BELOW FOR PROJECT STATUS.	4,323.3	1,633.7	2,689.6	APR 83	OCT 82
M 80 6350 2200	AUTO IDENT SIZING + COUNTING OF PARTICULATE CONTAMINATION THE SYSTEM IS OPERATIONAL AND SAMPLE PREPARATION PROBLEMS HAVE BEEN SOLVED. NEW SOFTWARE INCORPORATING RECENTLY DEVELOPED ALGORITHMS FOR MORE PRECISE MEASUREMENTS WHICH ARE MORE USER FRIENDLY HAVE BEEN PROCURED.	113.5			SEP 82	MAR 83
M 80 6350 2205	HOLOGRAPHIC INSPECTION OF ROTARY FORGED PREFORMS PHASE I SYS IS ELECTRONICALLY AND MECHANICALLY COMPLETE AND TECHNICALLY MEETS THE CRITERIA. FOR FINAL ACCEPTANCE, A DEMONSTRATION OF THE OPERATIONAL REQUIREMENTS AND CERTAIN COMPUTER SOFTWARE WILL BE CONDUCTED IN DEC. 1982.	105.0				JUN 83
M 80 6350 2225	3D SHOCK/VIB TEST F/MISSILE + ART FUZE MTLs ***** DELINQUENT STATUS REPORT *****	69.5	50.0	19.5	DEC 82	JUN 83
M 80 6350 2227	SETBACK DRAG TESTER F/S+A DEVICES ***** DELINQUENT STATUS REPORT *****	99.0		99.0	JUN 82	JUN 83

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PROJ NO.	TITLE & STATUS	AUTHORIZED (\$DDO)	CONTRACT VALUES (\$DDD)	EXPENDED LABOR AND MATERIAL (\$DDD)	ORIGINAL PROJECTED COMPLETE DATE	PRESENT PROJECTED COMPLETE DATE
M 8D 635D 2235	ACOUSTIC EMISSION WELD MONITOR SEE PROJECT NO M B2 6350-2235 FOR PROJECT AND FUNDING STATUS.					DEC 84
M 8D 635D 2238	USE OF TORSIONAL BRAID ANALYSIS TO MONITOR PREPREG AGING ***** DELINQUENT STATUS REPORT *****					
M 8D 635D 2401	CANNON TUBE AUTOMATIC MAGNETIC BORESCOPE INSPECTION THE ONLY PROGRESS MADE WAS THE REDESIGN OF THE SCANNING PROBE ASSEMBLY. THE PROJECT HAS BEEN DELAYED DUE TO HIGHER PRIORITY WORK IN THE MACHINE SHOP.	362.0				SEP 84
M 8D 635D 2402	INSP PROC-TEST INSTR F/MASS PROO SCATTERABLE MINES COMPUTER ***** DELINQUENT STATUS REPORT *****					
M 8D 635D 2405	BURN TIME TEST FOR ZIRCONIUM POWDER IN THERMAL BATTERY ***** DELINQUENT STATUS REPORT *****	70.0	17.0			JUN 83
M 8D 635D 2406	IMPROVED TEST METHODS FOR STRUCTURAL FOAM SEE PROJECT NO M 81 6350-2406 FOR PROJECT STATUS.					JUN 83
M 8D 635D 2409	EMISSION SPECTROGRAPH ANAL MARAGING STEEL PLASMA EXCITATION ***** DELINQUENT STATUS REPORT *****	55.0		50.6		JUN 83
M 8D 635D 2418	HALF LIFE OF TRITIUM LAMPS THIS PROJECT HAS BEEN DELAYED DUE TO THE LATE RECEIPT OF HARDWARE SAMPLES AND TEST RESULTS. THE DATA ANALYSIS WILL NOT BE COMPLETED UNTIL JAN 83 AND THE PROGRAM COMPLETION DATE WILL SLIP TO MAR 83.	85.0	5.3	33.5		MAR 83
M 8D 635D 2419	FIRE CONTROL COMPONENTS AUTOMATIC INSPECTION THIS PROJECT HAS BEEN COMPLETED. THE DTF CRITERIA DEVELOPED BY THIS PROJECT CAN NOT BE RECOMMENDED FOR RESOLUTION MEASUREMENT FOR INSPECTION OF IMAGE QUALITY OF VISUAL OPTICAL SYSTEMS. THIS CRITERIA CAN LEAD TO FALSE REJECTIONS OF GOOD OPTICS.	80.0	32.0	27.0		MAR 83
M 8D 635D 2420	OPTICAL AND DIG STANDARDS AND MEASURING SYSTEM NBS HAS COMPLETED THE MEASURING EQUIPMENT. A NUMBER OF STANDARDS HAVE BEEN ASSESSED. THE RESULTS APPEAR PROMISING.	252.0				MAR 83
M 8D 635D 2422	INSPECT/MEAS METHOD FOR SPHERICAL SURFACED COMPONENTS THE FABRICATION OF THE TEST EQUIPMENT. THE PROFILE PLATES HAVE BEEN EVALUATED BY AN INDEPENDENT LABORATORY TECHNIQUE AT ARRADCOM.	50.0				JAN 83
M 8D 635D 2424	AUTOMATIC GEAR TOOTH CONTOUR INSPECTION SYSTEM SEE PROJECT NO. M 81 635D FOR PROJECT AND FUNDING STATUS.				JUL 82	AUG 83

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PROJ NO.	TITLE + STATUS	AUTHORIZED (\$000)	CONTRACT VALUES (\$000)	EXPENDED LABOR AND MATERIAL (\$000)	ORIGINAL PROJECTED COMPLETE DATE	PRESENT PROJECTED COMPLETE DATE
M 80 6350 2425	OPTICAL TESTING OF FAR INFRARED MATERIALS DURING LAST REPORTING PERIOD WORK WAS AT A MINIMUM DUE TO LABORATORY IMPOSED PRIORITIES.	85.0			SEP 82	JUN 83
M 80 6350 2431	COMPUTERIZED COLOR MATCHING SYSTEM THE EVALUATION OF THE TWO UNITS HAS BEEN COMPLETED. IT WAS CONCLUDED THAT THE UNITS ARE 5 TIMES MORE RELIABLE THAN HUMAN OBSERVERS. A FINAL TECHNICAL REPORT IS BEING PREPARED.	605.0			OCT 82	DEC 82
M 80 6350 2433	AUTO UNIVERSAL HI VOLTAGE POWER SUPPLY TEST CONSOLE FABRICATION OF THE ELECTRONICS CONSOLE HAS BEEN COMPLETED.	198.0			MAY 83	MAY 83
M 80 6350 2444	ULTRASONIC TESTING OF ROADWHEELS DUE TO THE TIME REQ TO COMPLETE THE ROAD TESTING, A SECOND CONTRACT EXTENSION HAS BEEN EXECUTED AT NO COST TO THE GOVERNMENT. A SECOND PIGGYBACK ROAD TEST OF THE ROADWHEELS HAS BEEN COMPLETED FOR A TOTAL OF 5260 TEST MILES.	55.0	41.5			MAR 83
M 80 6350 2445	ULTRASONIC TIRE INSPECTION ***** DELINQUENT STATUS REPORT *****	85.0	57.3			JUN 83
M 80 6350 2446	BLACKLIGHT VIDEO INSPECTION SYSTEM PROCUREMENT ACTIONS TO ACQUIRE AN AUTOMATIC BLACK LIGHT VIDEO INSPECTION SYSTEM WAS TAKEN. HOWEVER, NO BIDS WERE RECEIVED. AS A RESULT, THE SCOPE OF THIS EFFORT HAS BEEN SCALED DOWN. MANY OF THE AUTOMATIC FEATURES HAVE BEEN ELIMINATED.	79.0			JUN 83	MAR 84
M 80 6350 2450	GUN STEEL ADHESION CHROMIUM COATING MEASUREMENT THE ULTRACENTRIFUGAL ADHESION TEST ASSEMBLY WAS RECOVERED, INVENTORIED FOR COMPLETENESS OF THE VARIOUS SUBASSEMBLIES AND DELIVERED FOR MODIFICATION. DELIVERY OF THE COMPLETED SYSTEM IS SCHEDULED FOR OCT. 1983.	60.0				APR 84
M 80 6350 2453	THICKNESS MEASUREMENT OF NON-MAGNETIC COATINGS ***** DELINQUENT STATUS REPORT *****	83.0	65.6			JUN 83
M 80 6350 2603	PROVIDE AUTO SPHERICITY INTERFEROMETER F/TEST LENS SURFACES SEE PROJECT NO M 81 6350-2603 FOR STATUS.				APR 82	DEC 82
M 80 6350 2604	NEW COMPATIBILITY TEST METHOD FOR EXPLOSIVE SYSTEMS ***** DELINQUENT STATUS REPORT *****	58.0		50.0	SEP 81	MAR 83
M 80 6350 2611	SORPTION OF AGENTS ON ASC WHETLERITE SEE PROJECT NO M 82 6350-2611 FOR STATUS.					SEP 83

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		(\$000)	(\$000)	(\$000)		
M 80 6350 2613	INFLOW AIR BLEED TEST, LTC-712 ENGINE THE PROJECT WAS RE-EVALUATED REGARDING PROGRESS TO OATE, OBJECTIVE AND FUNDS. IT WAS DETERMINED THAT \$78.7K WOULD BE REQUIRED TO COMPLETE THE PROJECT. AS A RESULT OF THIS PROJECT RE-EVALUATION, AMMC FUNDED THE EFFORT AT \$78.7K.		78.7			DEC 83
M 80 6350 2614	TEMP. COMPENSATED VOLTAGE CONT CRYSTAL OSCILLATOR TEST METH. THE GOV HAS ACCEPTED THE FINAL REVISED METHODOLOGY AND TEST PROCEDURE FOR EVALUATING THE FREQUENCY STABILITY OF TEMPERATURE COMPENSATED VOLTAGE CONTROLLED CRYSTAL OSCILLATORS. THE CONTRACTOR STARTED TESTING CRYSTAL OSCILLATOR SEPT 82.		75.0	73.0		MAR 83
M 80 6350 2616	AUTOMATED SOFTWARE AIDS FOR TESTING REQUIREMENTS THE DEMONSTRATION/EVALUATION WAS PERFORMED AND PROVED THE FUNCTIONAL CHARACTERISTICS OF THE TOOL. DELIVERY AND TRAINING FOR THE SOFTWARE REQUIREMENTS ANALYZER FOR TEST TOOL HAS BEEN ACCOMPLISHED. INSTALLATION IN GOVERNMENT FACILITY IS IN PROGRESS.		150.0			JUN 83
M 80 6350 2621	THERMOELECTRIC MATERIALS TEST FINAL TESTING HAS BEEN COMPLETED, AND ALL ITEMS HAVE BEEN OELIVERED, INCLUDING THE FINAL REPORT.		95.0		JUL 81	DEC 82
M 80 6350 2623	NDT MEAS OF GOLD PLATING THICKNESS ON SMALL CYL COMP WIRES THIS PROJECT HAS BEEN COMPLETED.		117.0	117.0		SEP 82
M 80 6350 2624	AUTO ANALYSIS OF PCB PLATING SOLUTION STRENGTH THIS PROJECT HAS BEEN COMPLETED. THIS PROJECT ESTABLISHED THE FEASIBILITY TO AUTOMATE THE ANALYSIS OF A PLATING SOLUTION.		75.0			SEP 82
M 80 6350 2625	HYBRID CIR CHIP SEMICONDUCTOR ELEC TEST + SCREEN PROCEDURE THIS PROJECT HAS BEEN COMPLETED.		81.0			JUN 82
M 80 6350 2627	INFRARED SPECTROSCOPY ANALYSIS OF NON-VOLATILE VEHICLES ***** DELINQUENT STATUS REPORT *****		20.0	20.0	APR 81	JUN 83
M 80 6350 2628	STANDARD CONTAMINANT FOR TEST FUELS IT WAS DETERMINED THAT POLYPROPYLENE IS SUITABLE FOR TESTING FUELS AND FILTERS. POLYPROPYLENE HAS A DENSITY APPROACHING THAT OF DIESEL FUEL. TESTS WERE CONDUCTED USING POLYPROPYLENE. THERE WAS NO DISCERNABLE CORROSION OR CARBON BUILD UP.		30.0		AUG 81	JAN 83
M 80 6350 2629	GUN TUBE REMOTE VISUAL INSPECTION DUE TO THE COST OF THE 2 BIOS THIS PROJECT WAS CANCELLED AND THE FUNDS TRADED OFF TO A NEW PROJECT CALLED ACOUSTIC EMISSION.		79.0			DEC 82

S U M M A R Y P R O J E C T S T A T U S R E P O R T
MANUFACTURING METHODS AND TECHNOLOGY PROGRAM
2ND SEMI-ANNUAL SUBMISSION CY 82 RCS DRCMT-301

PROJ NO.	TITLE + STATUS	AUTHO- RIZED	CONTRACT VALUES	EXPENDED LABOR AND MATERIAL (\$000)	ORIGINAL PROJECTED COMPLETE DATE	PRESENT PROJECTED COMPLETE DATE
		(\$000)	(\$000)	(\$000)		
M 80 6350 2630	CRITICAL ULTRASONIC INSPECTION PROBLEMS WITHIN THE ARMY A PROGRAMMABLE VECTOR ANALYZER HAS BEEN RECEIVED. THIS INSTRUMENT WILL ENABLE THE MEASUREMENT OF THE ELECTRICAL CHARACTERISTICS OF ULTRASONIC TRANSDUCERS. THE PROCUREMENT ACTION FOR THE ACQUISITION OF A CUSTOM BUILT IMMERSION TANK WAS COMPLETED.	92.9	20.9	29.5	JAN 81	MAR 83
M 80 6350 2631	CRITICAL ELECTROMAGNETIC INSPECTION PROBLEMS WITHIN THE ARMY SEE PROJECT NO M 81 6350-2631 FOR PROJECT AND FUNDING STATUS.					SEP 83
M 80 6350 2632	DEVELOPMENT OF INFRARED AND OPTICAL TESTS ***** DELINQUENT STATUS REPORT *****	103.0			DEC 81	JUN 83
M 80 6350 2633	FOURIER TRANSFORM IR TECHNIQUES FOR QC OF PREPREG SYSTEM ***** DELINQUENT STATUS REPORT *****	30.0		10.0	FEB 81	JUN 83
M 80 6350 2639	ROADWHEEL SEAL TEST MACHINE SEE PROJECT NO M 81 6350-2639 FOR PROJECT AND FUNDING STATUS.				JUN 82	JUN 84
M 80 6350 2640	TRACK TEST MACHINE SEE PROJECT NO M 82 6350-2640 FOR PROJECT AND FUNDING STATUS.				SEP 82	FEB 83
M 80 6350 2642	ADVANCED PENETRATING RADIATION TECH F/PRODUCT EVALUATION SEE PROJECT NO M 81 6350-2642 FOR PROJECT AND FUNDING STATUS.				SEP 80	JAN 83
M 80 6350 2646	PISTON ACTUATOR TEST ***** DELINQUENT STATUS REPORT *****	85.0		84.0		JUN 83
M 80 6350 2955	QA F/XM30 SERIES C8 PROTECTIVE GAS MASK LENS THE PROJECT HAS BEEN COMPLETED.	80.0	18.0	44.0	SEP 82	DEC 82
M 81 6350	MATERIALS TESTING TECHNOLOGY (MTT) SEE SUBTASKS BELOW FOR PROJECT STATUS.	4,349.0	1,510.0	2,839.0	OCT 83	OCT 83
M 81 6350 1802	M732 FIELD ARTILLERY FUZE/S+A TRANSPORTATION VIBRATION TEST THE FUNDS FOR THIS PROJECT HAVE BEEN EXHAUSTED. \$18,000 IS REQUIRED TO COMPLETE THIS EFFORT.	85.2		85.2		OCT 82
M 81 6350 2206	OPTICAL GAP INSPECTION SYSTEM THE PROTOTYPE MEASUREMENT SYSTEM DOES NOT PERFORM THE INTENDED INSPECTION. IT APPEARS THAT THE REQUIRED MODIFICATIONS WOULD BE MORE COSTLY THAN THE ORIGINAL EQUIPMENT. THEREFORE, IT HAS BEEN RECOMMENDED THAT THE PROJECT BE TERMINATED.	45.0			MAR 82	NOV 82
M 81 6350 2224	AUTOMATED ANTENNA PATTERN MEASUREMENT ***** DELINQUENT STATUS REPORT *****	20.0		6.0		JUN 83

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MANUFACTURING METHODS AND TECHNOLOGY PROGRAM

PROJ NO.	TITLE + STATUS	AUTHORIZED (\$000)	CONTRACT VALUES (\$000)	EXPENDED LABOR AND MATERIAL (\$000)	ORIGINAL PROJECTED COMPLETE DATE	PRESENT PROJECTED COMPLETE DATE
M 81 6350 2245	CERAMIC MATL NOT EVALUATION TECHNIQUES SEE PROJECT NO M 82 6350-2245 FOR PROJECT AND FUNDING STATUS.					JUN 83
M 81 6350 2401	CANNON TUBE AUTOMATIC MAGNETIC 80RESCOPE INSPECTION SEE PROJECT NO M 80 6350-2401 FOR STATUS.					SEP 84
M 81 6350 2406	IMPROVED TEST METHODS FOR STRUCTURAL FOAM THIS PROJECT HAS BEEN COMPLETED. THE RESULTS INDICATED THAT MOST ASTM TESTS ARE EQUALLY APPLICABLE TO STRUCTURAL FOAMS AND TO CONVENTIONAL MATERIALS, ALTHOUGH THE POSITIVE UPTAKE WAS FOUND NOT TO YIELD MEANINGFUL DATA FOR EITHER MATERIAL.					JUN 83
M 81 6350 2407	LIQUID CHROMATOGRAPHY FOR EPOXY RESIN FORMULATION THIS PROJECT HAS BEEN COMPLETED. HOWEVER, IT IS RECOMMENDED THAT THE TECHNIQUES DEVELOPED SHOULD BE RE-EVALUATED PERIODICALLY TO ACCOMMODATE FUTURE ADVANCES IN LIQUID CHROMATOGRAPHY TECHNOLOGY.	40.0	5.4	34.6		MAR 83
M 81 6350 2409	EMISSION SPECTROGRAPH ANAL MARGING STEEL PLASMA EXCITATION ***** DELINQUENT STATUS REPORT *****	60.0		30.9		JUN 83
M 81 6350 2418	HALF LIFE OF TRITIUM LAMPS A QUANTITY OF TRITIUM LAMPS WERE PRODUCED. HALF OF THE LAMPS WERE SUBJECTED TO AN ACCELERATED AGING TEST. THE BALANCE OF LAMPS WERE MAINTAINED AS A CONTROL. RESULTS FROM THE ACCELERATED TEST ARE BEING ANALYZED TO DETERMINE BRIGHTNESS DECAY PATTERNS.	85.0				MAR 83
M 81 6350 2419	FIRE CONTROL COMPONENTS AUTOMATIC INSPECTION THE OTF MEASUREMENTS DO NOT CORRELATE WITH STANDARD RESOLUTION TESTS WHICH CREATES THE POTENTIAL PROBLEM OF REJECTING OPTICAL INSTRUMENTS THAT ARE ACCEPTABLE FOR USE IN THE FIELD.	80.0				MAR 83
M 81 6350 2420	OPTICAL AND DIG STANDARDS AND MEASURING SYSTEM SEE PROJECT NO M 80 6350-2420 FOR STATUS.					MAR 83
M 81 6350 2424	AUTOMATIC GEAR TOOTH CONTOUR INSPECTION SYSTEM SEE PROJECT NO. M 82 6350-2424 FOR PROJECT AND FUNDING STATUS.					AUG 83
M 81 6350 2603	PROVIDE AUTO SPHERICITY INTERFEROMETER F/TEST LENS SURFACES MEASUREMENTS OF THE MASTER RADII TEST GLASSES OBTAINED FROM THE OPTICS SHOP HAS BEEN COMPLETED. THE INTERFEROMETER APPEARS TO BE A BETTER APPROACH TO THE MEASUREMENT OF RADII. THE TEST METHOD IS NON-CONTACT THEREBY REDUCING THE RISK OF DAMAGE.	110.0				OEC 82
M 81 6350 2604	NEW COMPATIBILITY TEST METHOD FOR EXPLOSIVE SYSTEMS ***** DELINQUENT STATUS REPORT *****					

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PROJ NO.	TITLE + STATUS	AUTHORIZED (\$000)	CONTRACT VALUES (\$000)	EXPENDED LABOR AND MATERIAL (\$000)	ORIGINAL PROJECTED COMPLETE DATE	PRESENT PROJECTED COMPLETE DATE
M 81 6350 2616	AUTOMATED SOFTWARE AIDS FOR TESTING REQUIREMENTS SEE PROJECT NO M 80 6350-2616 FOR STATUS.					JUN 83
M 81 6350 2631	CRITICAL ELECTROMAGNETIC INSP PROBLEMS WITHIN THE ARMY THE EDDY CURRENT INSTRUMENTATION FOR DETERMINATION OF CASE DEPTH WAS CHECKED-OUT. THE EVALUATION OF EQUIPMENT TO PERFORM CASE DEPTH IS SCHEDULED TO START IN JANUARY 1983.	67.0		17.0		SEP 83
M 81 6350 2633	FOURIER TRANSFORM IR TECHNIQUES FOR QC OF PREPREG SYSTEM ***** DELINQUENT STATUS REPORT *****					
M 81 6350 2639	ROADWHEEL SEAL TEST MACHINE THE DESIGN WORK HAS BEEN COMPLETED. PROCUREMENT OF REQUIRED PURCHASED ITEM IS IN PROGRESS. IN-HOUSE FABRICATION OF THE MACHINE IS IN PROCESS. THE PROGRAM HAS SLIPPED 180 DAYS DUE TO PERSONNEL PROBLEMS. THIS IS REFLECTED IN REVISED COMPLETION DATE.	80.0	1.8	58.2		JUN 84
M 81 6350 2640	TRACK TEST MACHINE SEE PROJECT NO M 82 6350-2640 FOR PROJECT AND FUNDING STATUS.					FEB 83
M 81 6350 2642	ADVANCED PENETRATING RADIATION TECH F/PRODUCT EVALUATION A NUMBER OF FORMER MIT TASKS HAVE BEEN COMBINED TO FORM THIS EFFORT. THESE TASKS ARE HIGH-RESOLUTION RADIOGRAPHY, NEUTRON RADIOGRAPHY, RADIOMETRY, RADIOGRAPHIC QUALIFICATION. THE MTM15 DATA BASE DOES NOT MAINTAIN DATA ON SUB-TASKS.	73.0		59.7		JAN 83
M 81 6350 2800	THERMAL + DYNAMIC MECH CHAR-PREPREG AGING AND CURE BEHAVIOR ***** DELINQUENT STATUS REPORT *****					
M 81 6350 2801	NEW PROPELLANT SURVEILLANCE SEE PROJECT NO. M 82 6350-2801 FOR STATUS.	65.0		65.0		SEP 82
M 81 6350 2802	PYROTECHNIC INGREDIENT ACCEPTANCE TESTING SEE PROJECT NO. M 82 6350-2802 FOR STATUS.	85.0		85.0	JUN 83	JUN 83
M 81 6350 2803	AUTO MEAS OF STRENGTH + OXIDE LIMITING FLAWS IN CERAMIC TURB ***** DELINQUENT STATUS REPORT *****	75.0	35.0		AUG 83	AUG 83
M 81 6350 2804	BINARY MUNITIONS MECHANICAL RUPTURE PROPERTIES TEST THE PROTOTYPE TESTER DESIGN HAS ESSENTIALLY BEEN FINALIZED. THE FABRICATION OF THE TESTER IS UNDERWAY. IN GENERAL, THE CONTRACTUAL EFFORT IS ON SCHEDULE AND FUNDS EXPENDITURE IS PROGRESSING ACCORDINGLY.	25.0				JUL 83
M 81 6350 2808	ADVANCED NDT OF REINFORCED PLASTIC COMPOSITES-SPAR + BEAM ***** DELINQUENT STATUS REPORT *****	100.0		95.0		JUN 83

MANUFACTURING METHODS AND TECHNOLOGY PROGRAM
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PROJ NO.	TITLE + STATUS	AUTHORIZED (\$000)	CONTRACT VALUES (\$000)	EXPENDED LABOR AND MATERIAL (\$000)	ORIGINAL PROJECTED COMPLETE DATE	PRESENT PROJECTED COMPLETE DATE
M 81 6350 2811	M42/M46 MAGNETIC FLUX LEAKAGE INSPECTION THE MFL INSPECTION SYSTEM DESIGN AND STANDARDS HAVE BEEN REVIEWED. THE FABRICATION OF THE SYSTEM IS UNDERWAY.	230.0				AUG 83
M 81 6350 2813	ADAPTION KIT FUNCTION EMBEDDED MICROPROCESSOR TESTING THE REQUIREMENT DEFINITION FOR THE MODULE HAS BEEN INITIATED. THESE REQUIREMENTS ARE BASED ON THE PII SAFS AND ITS SUB-COMPONENTS. AN AUTOMATIC TEST SYSTEM CAPABILITY FOR THE SAFS, SACA, WPCA, AND OPTICAL LINK IS BEING DEVELOPED.	611.0				APR 84
M 81 6350 2814	GC/ MASS SPECTROSCOPY TWO METHODS WERE DEVELOPED FOR DETERMINING THE AMOUNT OF BENZANTHRONE IN VARIOUS DYES. A FINAL TECHNICAL REPORT IS BEING PREPARED.	50.0				DEC 82
M 81 6350 2815	CANNON TUBE AUTOMATED CHROME PLATE THICKNESS MEASUREMENT A SET CHECK WAS DESIGNED, MANUFACTURED AND DELIVERED. A CONTRACT HAS BEEN WRITTEN TO DEVELOP A SYSTEM INTERFACE WITH THE 8 IN. GUN TUBE INSPECTION SYSTEM. FIXTURE DESIGN FOR SAME HAS BEEN INITIATED.	69.6			OCT 82	SEP 83
M 81 6350 2817	FIBER OPTIC CABLE ASSEMBLIES TEST CRITERIA DEVELOPMENT A SUGGESTION FROM CECOM CONCERNING THE POSSIBLE DUPLICATION WAS EVALUATED. AFTER THE REVIEW IT WAS DECIDED TO REVISE THE STATEMENT OF WORK TO REMOVE THE DUPLICATION.	160.0	141.0			JAN 84
M 81 6350 2820	INTEGRATED FOCAL PLANE MODULE TEST STATION FPA AND CCD TEST PARAMETERS WERE DEFINED AND A DATA BASE WAS DESIGNED AND STRUCTURED. ADDITIONALLY, SOFTWARE PACKAGES THAT WILL BE USED TO TEST CCE AND FPA WERE DESIGNED.	200.0				OCT 83
M 81 6350 2821	SEMICONDUCTOR NOT ENDURANCE TEST METHODOLOGY THIS PROJECT HAS BEEN COMPLETED. AS A RESULT, THE MANUFACTURER OF THESE NONVOLATILE SEMICONDUCTOR, GENERAL INSTRUMENTS, HAS AWARDED A FOLLOW-UP CONTRACT TO HONEYWELL TO ADAPT THE CORRELATION AS A SPECIFIC SCREENING METHOD FOR EARM PRODUCTS.	91.0	77.6	11.0		JUL 82
M 81 6350 2826	LIQ CHROMATOGRAPHIC ANALYSIS-NITRUCELULOSE BASE PROPELLANTS SEE PROJECT NO M 82 6350 FOR PROJECT AND FUNDING STATUS.					SEP 83
M 81 6350 2827	N-HEXYLCARBORANE CAPILLARY GAS CHROMATOGRAPHIC ANALYSIS ***** DELINQUENT STATUS REPORT *****	90.0		81.0	AUG 82	JUN 83
M 81 6350 2828	COMP MOTOR CASES ACOUSTIC EMISSION PROOF TEST DAMAGE EVAL A SENSOR, PATTERNED AFTER AN NBS DESIGN, WAS FABRICATED HAVING A SMALL CONICAL, PIEZOELECTRIC ELEMENT WHOSE POINT CONTACTS THE SPECIMEN. TESTS WITH THIS PULSE-TYPE SENSOR DEMONSTRATED THAT ITS RESPONSE AGREES IDENTICALLY WITH THE THEORY.	94.2		61.8		DEC 83

MANUFACTURING METHODS AND TECHNOLOGY PROGRAM
STATUS REPORT
SU MARY PROJECT SUBMISSION CY 82 RCS DRCMT-3D1

PROJ NO.	TITLE + STATUS	AUTHORIZED	CONTRACT VALUES	EXPENDED LABOR AND MATERIAL (\$000)	ORIGINAL PROJECTED COMPLETE DATE	PRESENT PROJECTED COMPLETE DATE
M 81 6350 2829	DETECTOR DEWAR MICROPHICS PROD TEST SET + PROCEDURES THE VIBRATIONAL EQUIPMENT FOR SIMULATING COMMON MODULE COOLER VIBRATIONS REQUIREMENTS HAVE BEEN DEFINED. WORK IS UNDERWAY TO DESIGN THE INTERFACE FIXTURE FOR THE UNIT UNDER TEST.	210.0	57.0			AUG 83
M 81 6350 2834	IMPROVED TRACK PIN SHOT PEENING INSPECTION SEE PROJECT NO M 82 6350-2834 FOR STATUS.					APR 84
M 81 6350 2858	STRESS READING TRANSDUCER FOR LARGE COMPOSITE COMPONENTS INSTRUMENTATION WHICH CAN EMIT LIGHT AT A SPECIFIC WAVELENGTH AND INTENSITY AND A POWER METER WHICH CAN MEASURE TRANSMITTED LIGHT EITHER LINEAR OR LOGARITHMIC SCALE HAS BEEN RECEIVED AND OPERATED SUCCESSFULLY.	75.0		75.0	DEC 82	MAY 83
M 81 6350 2943	DEPLETED URANIUM KE PENETRATORS ULTRASONIC INSP PROCEDURES THE PROJECT HAS BEEN DELAYED DUE TO THE ABSENCE OF THE DEPLETED URANIUM STANDARDS. THE CALIBRATION OF ULTRASONIC EQUIPMENT, SET-UP OF THE ULTRASONIC TANK, SCAN MECHANISM WAS COMPLETED.	75.0			DEC 82	FEB 83
M 81 6350 2944	PROTECTIVE MASK CANISTER ELECTROMAGNETIC INSP PROCEDURES A CONTRACT WAS AWARDED TO DESIGN + CONSTRUCT A PROTOTYPE DEVICE TO DETECT DEFECTS THAT OCCUR IN PROTECTIVE MASK FILTER CANISTER THREADED AREA.	30.0			DEC 82	MAR 83
M 81 6350 2945	QA OF COMPUTERIZED INSPECTION EQUIPMENT SOFTWARE A CONTRACT WAS PLACED FOR MULTI-USER MICROPROCESSOR SYSTEM. MIL-HDBK-204 CHAPTER 11 ENTITLED COMPUTER AIDED INSPECTION EQUIPMENT WAS PREPARED.	125.0			NOV 82	APR 83
M 81 6350 2947	MOBILITY MONITORING SYSTEM (MMS) THE INPUT SIGNAL CONDITIONING CIRCUITS WERE REVIEWED. ELECTRICALLY EQUIVALENT PARTS ARE BEING USED FOR LABORATORY TESTS. PENDING RECEIPT OF BACK-ORDERED DECODER TYPE MICROCIRCUITS.	80.0	80.0		DEC 84	DEC 84
M 81 6350 2977	IMAGE INTENSIFIER SYSTEM VEILING GLARE TESTER THE CONTRACT PACKAGE WAS SUBMITTED TO PROCUREMENT. THE CONTRACT IS SCHEDULED TO BE AWARDED IN JUNE 1983.	100.0			SEP 84	SEP 84
M 82 6350	MATERIALS TESTING TECHNOLOGY (MTT) SEE SUBTASKS BELOW FOR PROJECT STATUS.	573.0	2,280.8	2,292.2	OCT 84	OCT 84
M 82 6350 2235	ACOUSTIC EMISSION WELD MONITOR THE CONTRACT FOR PHASE 3 WAS AWARDED TO GENERAL AMERICAN RESEARCH DIVISION IN SEPTEMBER 1982. A CLARIFICATION MEETING WAS HELD WITH THE CONTRACTOR REGARDING THE MASKING STUDY AIMED AT REDUCING OR ELIMINATING FALSE SIGNALS DURING GRINDING.	185.0	185.0			DEC 84

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PROJ NO.	TITLE + STATUS	AUTHORIZED (\$000)	CONTRACT VALUES (\$000)	EXPENDED LABOR AND MATERIAL (\$000)	ORIGINAL PROJECTED COMPLETE DATE	PRESENT PROJECTED COMPLETE DATE
M 82 6350 2245	CERAMIC MATL NDT EVALUATION TECHNIQUES WORK ON EDDY CURRENT TECHNIQUES IS CONTINUING TO EVALUATE C SCAN FOR CERAMIC MATERIALS. AN ULTRASONIC CONTOUR FOLLOWING CAPABILITY WILL BE UTILIZED TO INSPECT ACTUAL COMPONENTS.	200.0	75.0	5.0	APR 83	JUN 83
M 82 6350 2424	AUTOMATIC GEAR TOOTH CONTOUR INSPECTION SYSTEM PHASE I OF THIS EFFORT HAS BEEN COMPLETED. THE MACHINE HAS ACHIEVED THE ANTICIPATED ACCURACY MANUALLY AS AN X-Y COORDINATE MEASURING MACHINE. DEMONSTRATION HAS BEEN SATISFACTORILY PERFORMED AND THE FINAL REPORT HAS BEEN APPROVED.	453.0	453.0			AUG 83
M 82 6350 2448	IMPROVED GB SIMULANT FOR LIFE TESTING OF CHARCOAL FILTERS PHASE II OF THE EFFORT STARTED. THE CONTRACT WAS AWARDED IN OCT. THE FABRICATION OF THE VACUUM TEST CELL HAS BEEN COMPLETED.	46.0			JUN 83	SEP 83
M 82 6350 2611	SORPTION OF AGENTS ON ASC WHETLERITE THE BALANCE HOUSING WAS RELOCATED TO FACILITATE THE SAMPLE LOADING. THIS MODIFICATION IS EXPECTED TO IMPROVE THE ACCURACY AND PRECISION OF THE TGA DATA.	100.0			SEP 83	SEP 83
M 82 6350 2630	CRITICAL ULTRASONIC INSPECTION PROBLEMS WITHIN THE ARMY SEE PROJECT NO M 80 6350-2630 FOR PROJECT AND FUNDING STATUS.					MAR 83
M 82 6350 2640	TRACK TEST MACHINE ALL COMPONENT PART FABRICATION IS 95 PCT COMPLETE. DUE TO SHOP PRIORITIES AND PROCUREMENT DELAYS, THE ASSEMBLY OF THE EQUIP COMPONENTS HAS BEEN SLIPPED. THE EQUIP IS NOW SCHEDULED FOR COMPLETION FEB 1983.	275.0		240.0		FEB 83
M 82 6350 2695	ACCEPTANCE TEST FOR 20MM DECLUTCHING FEEDERS ON PRODD CONTR A SURVEY OF CURRENT PRODUCERS OF DECLUTCHING FEEDER IS BEING CONDUCTED. CONTACTS HAVE BEEN MADE TO DETERMINE THE AVAILABILITY OF FEEDERS AND POWER SUPPLIES.	92.3			JUN 83	JUN 83
M 82 6350 2801	NEW PROPELLANT SURVEILLANCE TEST A NEW TEST METHOD HAS BEEN DEVELOPED USING NO GASES RELEASED FROM NITROCELLULOSE AND NITROGLYCERIN IN THE COURSE OF CHEMICAL DEGRADATION. IT HAS BEEN DETERMINED THE NEW METHOD CAN BE PHASED-IN TO REPLACE TRADITIONAL TESTING.	70.0			JUL 83	JUL 83
M 82 6350 2802	PYROTECHNIC INGREDIENT ACCEPTANCE TEST PARTIAL IMPLEMENTATION HAS BEEN ACHIEVED BY REVISING MIL SPEC M-382C(AR). CHARACTERIZED SIX IMPORTANT BINDERS USED IN PYROTECHNIC COMPOSITIONS. CONDUCTED PHOTOMICROGRAPHIC STUDIES OF ALL METALS AND TEFLON.	75.0		45.0	JUN 83	JUN 83

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PROJ NO.	TITLE + STATUS	AUTHORIZED (\$000)	CONTRACT VALUES (\$000)	EXPENDED LABOR AND MATERIAL (\$000)	ORIGINAL PROJECTED COMPLETE DATE	PRESENT PROJECTED COMPLETE DATE
M 82 6350 2804	BINARY MUNITIONS MECHANICAL RUPTURE PROPERTIES TEST SEE PROJECT NO. M 81 6350-2804 FOR STATUS.	40.0			JUL 83	JUL 83
M 82 6350 2811	M42/M46 MAGNETIC FLUX LEAKAGE INSPECTION THE SCOPE OF WORK HAS BEEN COMPLETED.	90.0			FEB 84	FEB 84
M 82 6350 2813	ADAPTION KIT FUNCTION EMBEDDED MICROPROCESSOR TESTING SEE PROJECT NO M 81 6350-2813 FOR STATUS.				APR 84	APR 84
M 82 6350 2820	INTEGRATED FOCAL PLANE MODULE TEST STATION SEE PROJECT NO M 81 6350-2820 FOR STATUS.					OCT 83
M 82 6350 2826	LIQ CHROMATOGRAPHIC ANALYSIS-NITROCELLULOSE BASE PROPELLANTS A COMPUTER PROGRAM HAS BEEN DEVELOPED TO AID IN SELECTION OF THE OPTIMUM SOLVENT COMPOSITION FOR SEPERATION OF UP TO 32 INGREDIENTS. THIS SHOULD BE A WORST CASE TEST FOR THE COLUMNS.	80.0		32.3		SEP 83
M 82 6350 2834	IMPROVED TRACK PIN SHOT PEENING INSPECTION AN AUTOMATIC TRACK PIN ANALYZER WHICH IS TO BE USED IN CONJUNCTION WITH A FASTRESS ANALYZER WAS DEVELOPED. THIS SYSTEM IS DESIGNED TO TRIGGER AN ALARM IF THE SHOT PEEN QUALITY FALLS BELOW A PREDETERMINED GO, NO-GO VALUE.	208.0			AUG 84	APR 84
M 82 6350 2841	STANDARDIZATION OF FRACTURE TOUGHNESS TESTS TWO OF THREE TYPES OF SIMPLE BEND TEST WITH URANIUM HAVE BEEN COMPLETED FOR CORRELATION WITH KIC RESULTS AND COMPARISON WITH SERVICE SIMULATION TESTING OF URANIUM LONG-ROD PENETRATORS.	50.0				SEP 83
M 82 6350 2844	MEASURING PROJECTILE RESISTANCE TO FREE FALL IMPACT THE KINETIC ENERGY MACHINE FOR DROPPING LARGE CALIBER PROJECTILES HAS BEEN ASSEMBLED. THE TEST FIXTURE FOR 5 INCH AND 8 INCH PROJECTILES PROVEOUT HAS BEEN PERFORMED WITH EXCELLENT PRELIMINARY RESULTS. THE RELEASE MECHANISMS APPEAR TO WORK WELL.	75.0	5.0	9.4	OCT 83	OCT 83
M 82 6350 2876	PROTOTYPE INFRARED SEEKER AND AUTO PILOT TESTING THE INFRARED SCENE GENERATOR SYSTEM HAS BEEN DEMONSTRATED. THE IMAGE PRODUCED HAS ADEQUATE EXTERNAL DETAIL AND INTENSITY FURNED ON THE SCREEN, ZOOMED AND TRANSLATED SPATIALLY. THIS WAS ACCOMPLISHED WITH LESS THAN 5 WATTS OF LASER OUTPUT POWER.	90.0	85.0	5.0		SEP 84
M 82 6350 2878	STRAIGHTENING OF GUN TUBE FORGINGS BY MEANS OF EMAT A FEASIBILITY STUDY FOR USE OF THE EMAT SYSTEM ON GUN TUBE MATERIAL WAS CONDUCTED. AS A RESULT, A DECISION WAS MADE TO APPLY EMAT SYSTEM TO THE NEW STRAIGHTENING PRESS.	63.0			JUN 86	JUN 86

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PROJ NO.	TITLE + STATUS	AUTHORIZED (\$000)	CONTRACT VALUES (\$000)	EXPENDED LABOR AND MATERIAL (\$000)	ORIGINAL PROJECTED COMPLETE DATE	PRESENT PROJECTED COMPLETE DATE
M 82 635D 288D	STRAIN TEMP DEPN + SCAT MEAS TECH + EQUIP FOR LASER ROD EVAL **** DELINQUENT STATUS REPORT ****	250.0			MAY 84	MAY 84
M 82 635D 2881	DYNAMIC LASER ROD EVALUATION THE UNIVERSAL PUMP CAVITY HAS BEEN FABRICATED. IT IS NOW BEING INCORPORATED INTO THE LASER SYSTEM. THE SYSTEM WILL BE DELIVERED TO NVEOL AND INTERFACED WITH ZYGO INTERFEROMETER.	340.0			MAY 84	SEP 84
M 82 635D 2882	NUCLEAR MAG RESONANCE TEST FOR DETM MOISTURE IN COMPOSITES THE SCOPE OF WORK WAS FINALIZED. THE CONTRACT TO DESIGN AND FABRICATE THE SYSTEM WAS AWARDED SEPTEMBER 1982.	80.0	60.0		JUN 83	DEC 83
M 82 635D 2883	AUTO REFORMATTING OF ATE LANG FOR TESTING SEMICONDUCTORS TEST HARDWARE AND SOFTWARE COMMON TO FAIRCHILD AND TEKTRONIC ATE WAS IDENTIFIED. WORK IS PROCEEDING ON A TRANSLATOR FROM TEXTST INTO IN INTERMEDIATE LEVEL LANGUAGE.	144.0	144.0		OCT 82	AUG 83
M 82 635D 2887	SIMULANT PERMEATION TESTING OF PROTECTIVE CLOTHING THE SCOPE OF WORK WAS FORWARDED TO PROCUREMENT. SIX TECHNICAL PROPOSALS WERE RECEIVED AND EVALUATED. COST DATA IS CURRENTLY BEING EVALUATED. IT IS ESTIMATED THAT AN AWARD WILL BE MADE DURING DEC 1982.	45.0			JUN 83	DEC 83
M 82 635D 2889	PROCEDURES FOR INSPECTING + MONITORING THERMOPLASTIC RESINS A MICROPROCESSOR-CONTROLLED SOLVENT DELIVERY SYSTEM AND AN INTELLIGENT SAMPLE INJECTOR FOR HPLC WERE PROCURED AND ARE NOW BEING USED IN THIS EFFORT.	80.0	19.4	58.5	JUN 85	JUN 85
M 82 635D 2891	HG CD TE MATERIAL SCREENING TEST THE PROJECT HAS BEEN DELAYED DUE TO MERADCOM PROCUREMENTS INSTISTANCE THAT THE FUNDS CANNOT BE INCREMENTALLY AWARDED. WHEN THE FY83 FUNDS BECOME AVAILABLE, THE PROCUREMENT OFFICE WILL ACT TO MAKE THE TWO YEAR AWARD.	175.0			DEC 84	MAY 85
M 82 635D 2892	REMOTE IMAGING OF PREFORM DEFECTS BY COMPUTER CONTROL THE SCOPE OF WORK FOR THE TRANSITION FROM PHASE II TO PHASE III HAS BEEN COMPLETED. IT IS PROPOSED THAT THE MULTICHANNEL PARALLEL DIGITIZER BUILT DURING PHASE II BE CONNECTED TO A 256 ELEMENT PIEZOELECTRIC ARRAY THRU A 256 CHANNEL ANALOG TRANSMITTER.	85.0			DEC 83	DEC 83
M 82 635D 2894	RESIDUAL STRESS DETERMINATION BY ACOUSTIC WAVE VELOCITY THE TECHNIQUE FOR DETERMINING ULTRASONIC VELOCITY MEASUREMENT WAS SELECTED. THE INSTRUMENTATION FOR HIGH RESOLUTION VELOCITY MEASUREMENTS HAS BEEN IDENTIFIED. PROCUREMENT ACTION TO ACQUIRE THIS EQUIPMENT HAS BEEN INITIATED.	75.0	18.0	20.0	FEB 83	DEC 83

MANUFACTURING METHODS AND TECHNOLOGY PROGRAM
SUMMARY PROJECT STATUS REPORT
2ND SEMIANNUAL SUBMISSION CY 82 RCS ORCMT-301

PROJ NO.	TITLE + STATUS	AUTHORIZED (\$000)	CONTRACT VALUES (\$000)	EXPENDED LABOR AND MATERIAL (\$000)	ORIGINAL PROJECTED COMPLETE DATE	PRESENT PROJECTED COMPLETE DATE
M 82 6350 2895	NOT OF ADVANCED COMPOSITE STRUCTURES FOR BRIDGING INSTRUMENTATION AND COMPUTER HARDWARE REQ TO CONSTRUCT A PROTOTYPE ULTRASONIC C-SCAN SYSTEM FOR FIELD APPLICATION TO LARGE COMPOSITE STRUCTURES HAS BEEN PROCURED AND DELIVERED.	100.0	25.0	13.0	MAR 83	SEP 83
M 82 6350 2896	STANDARDIZED SOFTWARE TEST FACILITIES THE INTERIM TEST ITEM STIMULATOR CURRENTLY BEING DEVELOPED BY EPG HAS BEEN IDENTIFIED AS THE BASELINE SYSTEM TO WHICH ADDED FUNCTIONS WILL BE REQUIRED. DUE TO SOW DELAYS THREE MONTHS SLIPPAGE HAS OCCURRED.	466.0			AUG 84	AUG 84
M 82 6350 2897	STANDARD MONITORS TO INCREASE SOFTWARE TESTABILITY A TASKING SOW FOR CONTRACTOR ACTIVITY WAS PREPARED AND FORWARDED TO PROCUREMENT. DUE TO EARLY DELAYS AND TIME REQUIRED TO PROCESS THE SOW THE MILESTONE SCHEDULE SLIPPED BY 3 MONTHS.	355.0			DEC 85	DEC 85
M 82 6350 2901	LASER AIMING DEVICE REVIEWED THE FEASIBILITY OF ADAPTING EXISTING GATED TV SYSTEM. COMPLETED PROCUREMENT PACKAGE WAS FORWARDED TO PROCUREMENT. A REQUEST FOR EXTENSION OF FUNDS WAS SUBMITTED AND APPROVED.	170.0			AUG 84	OCT 84
M 82 6350 2913	IMPROVED METHODOLOGY FOR GENERATION OF TOXIC CHEM AGENTS TWO METHODS OF GENERATION HAVE BEEN IDENTIFIED, PIEZOELECTRIC CRYSTAL AND ULTRASONIC NOZZLE. BOTH METHODS ARE CURRENTLY BEING INVESTIGATED AND BREADBOARD MODELS SHOULD BE AVAILABLE FOR GUV INSP IN THE NEAR FUTURE.	19.9			SEP 84	SEP 83
M 82 6350 2916	AUTOMATING DEPOT REBUILD COMPONENT DIMENSIONAL INSPECTION PROCUREMENT DECIDED TO COMPETITIVELY SELECT A CONTRACTOR. THIS RESULTED IN A 5 MONTH DELAY WHICH IS REFLECTED IN THE REVISED SCHEDULE.	200.0		6.2	JUL 85	MAR 86
M 82 6350 2919	AUTO RESIDUAL STRESS INSP OF GUN TUBES + OTHER RELATED COMP A SEARCH HAS BEEN INITIATED + REQUESTS HAVE BEEN SENT TO CONTRACTORS TO OBTAIN INFORMATION FOR DESIGN + DEVELOPMENT OF A PROTOTYPE SYSTEM TO AUTOMATICALLY INSPECT THE RESIDUAL STRESSES OF GUN TUBES.	120.0			NOV 83	NOV 83
M 82 6350 2938	EDDY CURRENT CRACK INSP PROCEDURE F/BURE EVACUATOR HULES THE PROBE SELECTION AND PROCUREMENT WAS COMPLETED. A PORTION OF THE 120MM TUBE HAS BEEN OBTAINED WITH DRAWINGS AND SPECIFICATIONS. THE MULTIFREQUENCY EDDY CURRENT UNIT HAS BEEN RECEIVED AND IS OPERATIONAL.	54.0	4.0	4.0	MAR 83	SEP 83
M 82 6350 2945	QA OF COMPUTERIZED INSPECTION EQUIPMENT SOFTWARE SEE PROJECT NO. M 81 6350-2945 FOR STATUS.	120.0			JUN 83	APR 83

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PROJ NO.	TITLE + STATUS	AUTHORIZED (\$000)	CONTRACT VALUES (\$000)	EXPENDED LABOR AND MATERIAL (\$000)	ORIGINAL PROJECTED COMPLETE DATE	PRESENT PROJECTED COMPLETE DATE
M 82 6350 2950	ELECTRICALLY CONDUCTIVE ADHESIVES FOR HIGH STABILITY Q R B ***** DELINQUENT STATUS REPORT *****	77.0			JUN 83	JUN 83
M 82 6350 2951	AN/PRS-8 MINE DETECTOR PRODUCTION TEST SET THE CONTRACT TO DESIGN AND FABRICATE TWO PRODUCTION TEST SETS WAS AWARDED IN SEPT 1982. THE PHYSICAL LAYOUT OF THE TEST SET, AND A BREADBOARD VERSION OF THE ELECTRONIC INSTR AND CONTROL PACKAGE HAS BEEN FABRICATED.	115.0			MAR 83	APR 83
M 82 6350 3006	ACOUSTIC EMISSION MONITORING/CONTROL STRAIGHTENING FUNDS FOR THIS PROJECT WERE JUST RECEIVED.	59.0			SEP 83	SEP 83
M 81 6390	MMT PROGRAM IMPLEMENTATION AND INFORMATION TRANSFER PUBLICATION OF MANTECH JOURNAL.	250.0	184.7	50.3	MAR 82	JUN 83

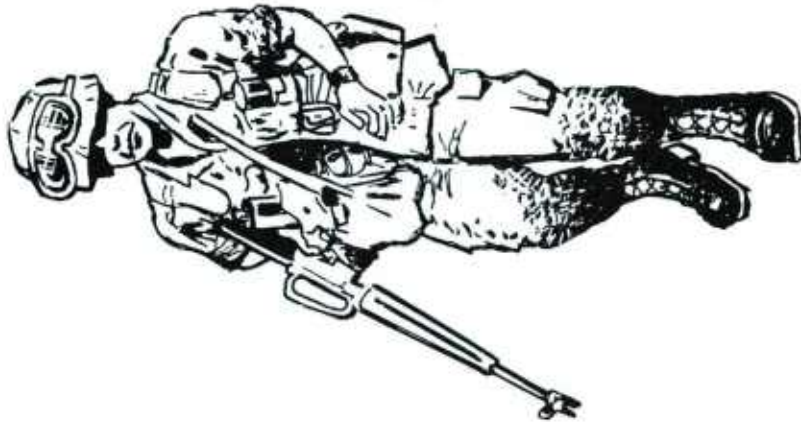
RUBBER HANDWARE



CLOTHING PATTERNS



HELMETS



NATICK R&D LABORATORIES
(NLABS)

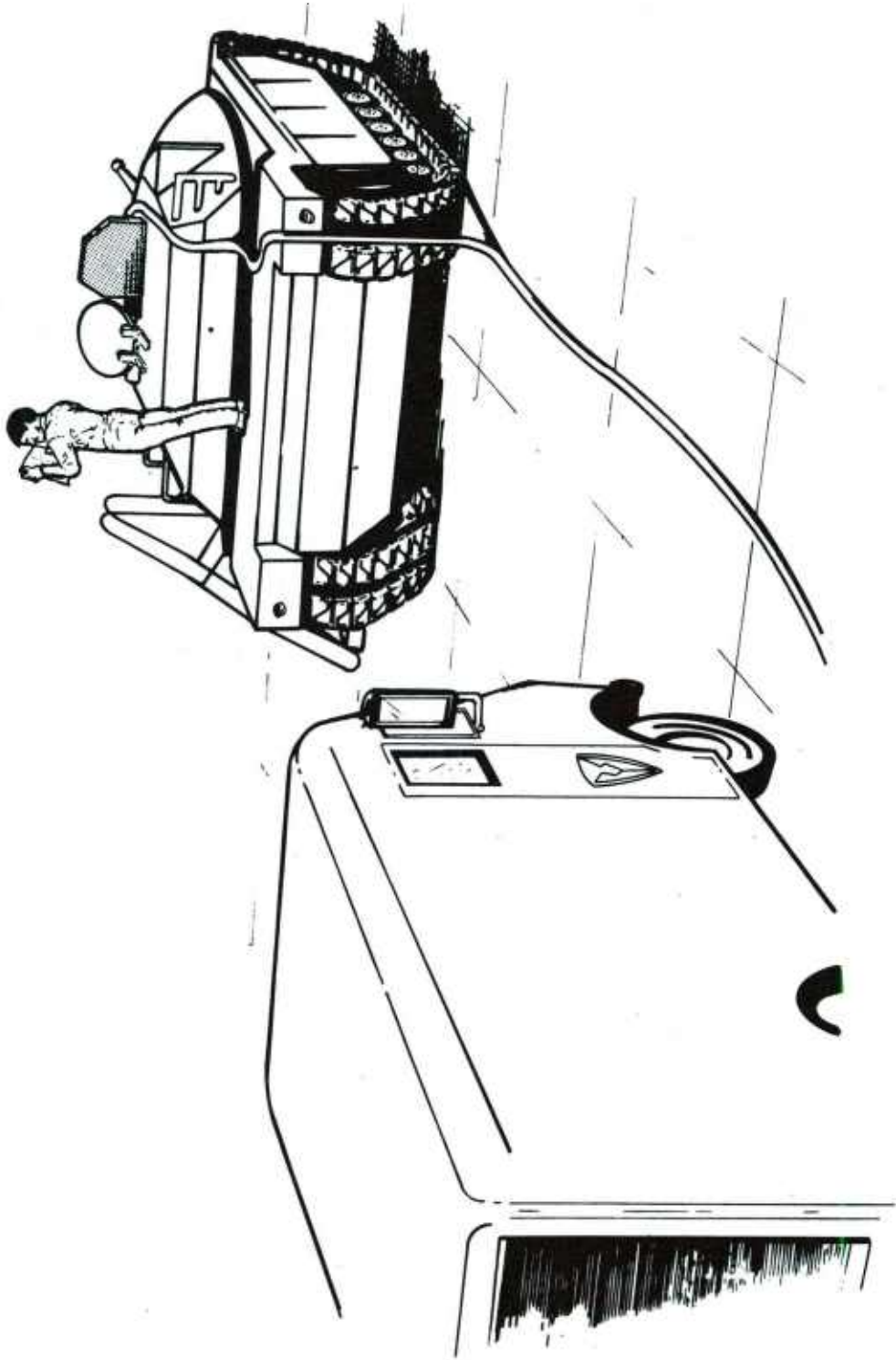
NATICK RESEARCH AND DEVELOPMENT LABORATORIES

CURRENT FUNDING STATUS, 2ND CY82

FISCAL YEAR	NO. OF PROJECTS	AUTHORIZED FUNDS (\$)	* #	C O N T R A C T A L L O C A T E D (\$)	F U N D I N G E X P E N D E D (\$)	* #	I N H O U S E R E M A I N I N G (\$)	F U N D I N G E X P E N D E D (\$)	* #
79	1	297,700		297,700	232,300 (78%)		0	0 (0%)	
80	2	85,900		36,100	0 (0%)		49,800	49,800 (100%)	
81	1	6,400		0	0 (0%)		6,400	6,400 (100%)	
82	0	0		0	0 (0%)		0	0 (0%)	
TOTAL	4	390,000		333,800	232,300 (69%)		56,200	56,200 (100%)	
AUTHORIZED FUNDING		CONTRACT ALLLOCATED 86%		INHOUSE REMAINING 14%					

MANUFACTURING METHODS AND TECHNOLOGY PROGRAM
SUMMARY PROJECT STATUS REPORT
2ND SEMI-ANNUAL SUBMISSION CY 82 RCS DRCMT-3D1

PROJ NO.	TITLE + STATUS	AUTHORIZED (\$000)	CONTRACT VALUES (\$000)	EXPENDED LABOR AND MATERIAL (\$000)	ORIGINAL PROJECTED COMPLETE DATE	PRESENT PROJECTED COMPLETE DATE
Q 80 8063	IMPROVED METHODS OF MANUFACTURING BUTYL RUBBER HANDWEAR ***** DELINQUENT STATUS REPORT *****	47.5	30.0	17.5	JUN 82	JUN 83
Q 81 8063	IMPROVED METHODS OF MANUFACTURING BUTYL RUBBER HANDWEAR ***** DELINQUENT STATUS REPORT *****	6.4		6.4		
Q 79 8066	CONTINUOUS FILAMENT HELMET PREFORM ***** DELINQUENT STATUS REPORT *****	297.7	297.7		MAR 81	JUN 83
Q 80 8066	CONTINUOUS FILAMENT HELMET PREFORM ***** DELINQUENT STATUS REPORT *****	38.4	6.1	32.3	JAN 82	JUN 83



TEST AND EVALUATION COMMAND (TECOM)

TEST AND EVALUATION COMMAND

CURRENT FUNDING STATUS, 2ND CY82

FISCAL YEAR	NO. OF PROJECTS	AUTHORIZED FUNDS (\$)	* * C O N T R A C T A L L O C A T E D (\$)	* * F U N D I N G E X P E N D E D (\$)	* * I N H O U S E R E M A I N I N G (\$)	* * F U N D I N G E X P E N D E D (\$)
81	1	768,000	104,800	104,800 (100%)	663,200	663,200 (100%)
82	1	726,000	0	0 (0%)	726,000	725,000 (99%)
TOTAL	2	1,494,000	104,800	104,800 (100%)	1,389,200	1,388,200 (99%)
AUTHORIZED FUNDING		CONTRACT ALLOCATED	7%	INHOUSE REMAINING		92%

MANUFACTURING METHODS AND TECHNOLOGY PROGRAM
SUMMARY PROJECT STATUS REPORT
2ND SEMIANNUAL SUBMISSION CY 82 RCS DRCMT-301

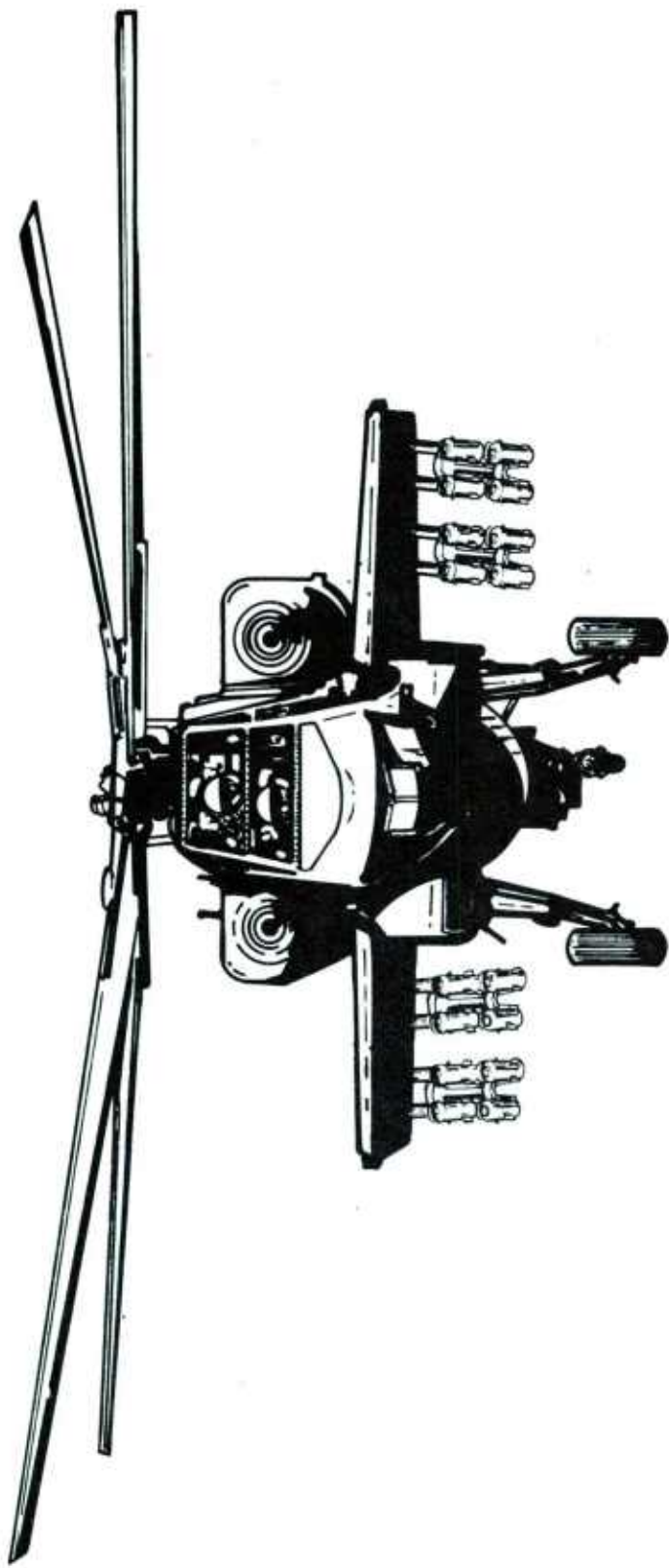
PROJ NO.	TITLE + STATUS	AUTHORIZED (\$000)	CONTRACT VALUES (\$000)	EXPENDED LABOR AND MATERIAL (\$000)	ORIGINAL PROJECTED COMPLETE DATE	PRESENT PROJECTED COMPLETE DATE
D 81 5071	TECOM PRODUCTION TEST METHODOLOGY ENGINEERING MEASURES SEE SUBTASKS BELOW FOR WORK STATUS.	768.0	104.8	663.2	DEC 83	DEC 83
O 81 5071 14	SMOKE OBSCURATION TEST PROCEDURES THE TECHNICAL APPROACHES FOR THE MEASUREMENT OF SMOKE OBSCURATION/ATTENUATION WAS ESTABLISHED. IN ADDITION, THE REQUIREMENT NECESSARY TO ACQUIRE EQUIPMENT AND INSTRUMENTATION WAS ALSO ESTABLISHED.					DEC 83
D 81 5071 53	CERTIFICATION OF LOOSE CARGO BOUNCE TEST THE INVESTIGATION HAS BEEN COMPLETED + FINAL RPT. SUBMITTED TO HQ TECOM IN SEPT 1982. THE STUDY RESULTED IN AN INSTRUMENT BEING DEVELOPED FOR COLLECTION OF LOOSE CARGO BOUNCE TEST DATA IN VARIOUS MILITARY VEHICLES.				DEC 81	DEC 83
O 81 5071 58	AIR VELOCITY INFLUENCES ON FUNGAL SPORE GERMINATION THE TECHNICAL INVESTIGATION TO ESTABLISH THE MAXIMUM PERMISSIBLE AIR FLOW FOR CHAMBER FUNGUS TEST, METHOD 508, MIL-STD-81DC WAS COMPLETED + APPROVED BY HQ TECOM.				DEC 83	DEC 83
O 81 5071 60	RECEIVER OPERATING CHARACTERISTICS MEASUREMENTS THE FIRST PHASE OF THE ROC METHODOLOGY INVESTIGATION HAS BEEN COMPLETED WHICH INCLUDED TECHNICAL REVIEW, INSTRUMENTATION REQMTS + PROCEDURES. THE INVESTIGATION IS IN SUSPENSION UNTIL THE EQUIPMENT IS PURCHASED THROUGH THE INSTRUMENTATION ACQUISITION.				DEC 83	DEC 83
D 81 5071 74	SMOKE SAMPLING/CHARACTERIZATION DATA WAS COLLECTED FROM 40 WIND TUNNELS TEST WITH FOG/IR MATERIALS. TESTS HAVE BEEN INITIATED TO ELIMINATE PROBLEM OF MOUNTED SAMPLER MOVEMENT. THE FINAL REPORT HAS BEEN SUBMITTED + APPROVED FOR PUBLICATION.				DEC 83	DEC 83
D 81 5071 78	AUTOMATION OF ANALYSIS OF EMI DATA THE FORMAT FOR INPUTTING EMI DATA WAS ESTABLISHED. TIME TO COST EST. FOR FAEF DATA TO THE COMPUTER DATA BASE WAS DETERMINED. THE FEASIBILITY + COST DATA TAPE VS. MODEM INPUT WERE EVALUATED. USE OF TAPE INPUT WAS DONE. THE INTERFACE REQMTS WERE IDENT.				DEC 83	DEC 83
D 81 5071 79	ENVIRONMENTAL ISSUES GUIDE FOR HUMID TROPIC TESTING THE BASIC MATRIX HAS BEEN DEVELOPED + HAS BEEN COORDINATED WITH THE US ARMY ENG TOPOGRAPHIC LAB. THE CONCEPT FOR ENTERING RETRIEVING DATA IS COMPLETED. THE FINAL RPT HAS BEEN WRITTEN + WILL BE SUBMITTED PENDING FINAL REVIEW.				DEC 83	FEB 83
D 81 5071 80	COMPUTER AIDED TEST PLANNING THE INITIAL DRAFTS HAVE BEEN COMPLETED FOR THE METHODOLOGY REPORT. THE FINAL RPT WAS SUBMITTED TO HQ TECOM AND IS PENDING APPROVAL. THE CAT PLAN IS FULLY OPERATIONAL AS THE CENTRAL TOOL FOR PRODUCING USATTC DETAILED TEST PLANS.				DEC 83	DEC 83

MANUFACTURING METHODS AND TECHNOLOGY PROGRAM
S U M M A R Y P R O J E C T S T A T U S R E P O R T
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PROJ NO.	TITLE + STATUS	AUTHORIZED (\$000)	CONTRACT VALUES (\$000)	EXPENDED LABOR AND MATERIAL (\$000)	ORIGINAL PROJECTED COMPLETE DATE	PRESENT PROJECTED COMPLETE DATE
D 82 5071	TECOM PRODUCTION TEST METHODOLOGY ENGINEERING MEASURES SEE SUBTASKS BELOW FOR WORK STATUS.	726.D		725.D	DEC 84	DEC 84
D 82 5071 D1	ACCEPTANCE TEST PROCEDURES THE CENTRAL LIBRARY FOR THE TOTAL ATP PROGRAM WAS MAINTAINED. THE ATP INDEX SUPPLEMENTS WERE PUBLISHED AND DISTRIBUTED. THE MASTER ATP INDEX WAS PUBLISHED + DISTRIBUTED. REGULAR DISTRIBUTION OF ATPS WAS MADE IN ACCORDANCE WITH TECOM REG 700-9.				DEC 84	DEC 84
D 82 5071 D2	TEST OPERATIONS PROCEDURES A TOTAL OF 19 TUPS HAVE BEEN FINALIZED DURING THIS PERIOD. SEVEN TUPS WERE COMPLETED THAT WERE COMPLETED AND PUBLISHED.				DEC 84	DEC 84
D 82 5071 D3	AUTO PARTICLE CONTAMINATION MEAS IN HYDRAULIC OIL THIS TASK WAS INITIATED IN MARCH 1982. INITIAL MEETING WAS TO DISCUSS ISO, SHELTERS, WANS, ETC. AS A RESULT OF THIS MEETING, A WRITTEN SURVEY IS BEING TAKEN TO FULLY DOCUMENT THE SPECIFIC INSTR. + FAC. REQMTS OF THE VARIOUS TESTERS.				DEC 84	DEC 84
D 82 5071 D4	ROLLOVER TEST OF MILITARY VEHICLES THE FIRST PHASE OF THIS INVESTIGATION WAS COMPLETED BY VAKIGAS RESEARCH, INC. A REPORT WAS COMPLETED. FIVE TYPES OF ARMY VEHICLES WERE IDENTIFIED AS HAVING HIGH ROLL-OVER HISTORY WHEN INVOLVED IN EMERGENCY MANEUVERS.				DEC 84	DEC 84
D 82 5071 D5	TEST AUTOMATION THREE TESTING AUTOMATION PROCEDURES WERE COMPLETED. TWO SETS OF PROCESSING REQUIREMENTS WERE ESTABLISHED. ADVANCED COMMUNICATIONS TESTING PROCEDURES FOR EVALUATION OF DIGITAL SYSTEM WERE ANALYZED. AUTOMATED ANALYSIS OF EMI DATA WERE IDENTIFIED.				DEC 84	DEC 84
D 82 5071 D6	GENERAL PURPOSE BIT SLICE MICROCOMPUTER A PROTOTYPE PCM/PAM MINICOMPUTER INTERFACE, EMPLOYING BIT-SLICE TECHNOLOGY WAS COMPLETED + TESTED. OTHER SYSTEMS WERE DEVELOPED, THEY WERE RAM CARD, DATA GENERAL. THESE SYSTEMS WERE TESTED DURING THIS PERIOD.				DEC 84	DEC 84
D 82 5071 D7	SOLAR POWERED INSTRUMENTATION VAN THE HEATER/COOLER SYSTEM HAS BEEN REDESIGNED TO OPERATE FROM SOLAR PWR. THE WIRING OF THE SIGNAL CONDITIONING SYSTEM + MICROCOMPUTER MAIN CHASSIS WAS COMPLETED. THE HEATER/COOLER SYSTEM HAS BEEN CHECKED OUT USING AUXILIARY PUMPS.				DEC 84	DEC 84
D 82 5071 D8	INTEROPERABILITY TEST METHODOLOGY A PRELIM. SPEC. FOR AN AUTOMATED TEST DRIVER WAS PRODUCED. A TECHNICAL REQMT FOR AN AUTOMATED TEST DRIVER SYSTEM ELECTRONIC SEMITRAILER WAS ALSO GENERATED. THE CONTRACTOR IS CURRENTLY DEFINING ME				DEC 84	DEC 84

S U M M A R Y P R O J E C T S T A T U S R E P O R T
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D 82 5071 71	COPPER CRUSHER PRESSURE GAGES THE INTERNAL BALLISTIC DIV., HAS COMPLETED ITS ANALYSIS OF THE CAPABILITY OF THE GAGE PARAMETER USING FINITE ELEMENTS AS ITS MEANS OF ANALYSIS + AN INITIAL DESIGN HAS BEEN COMPLETED. FURTHER WORK ON THIS TASK CANNOT BE DONE DUE TO THE LACK OF FUNDS.					DEC 84
D 82 5071 76	GAMMA DOSIMETRY IMPROVEMENT + MODERNIZATION PROGRAM A MAJOR PORTION OF THE GAMMA DOSIMETRY PROCESSED DURING FY82 WAS IN PRODUCTION SUPPORT OF M1 ABRAMS AND BRADLY FIGHTING VEHICLE SYSTEMS.					DEC 84
D 82 5071 77	ELECTROMAGNETIC RADIATION EFFECTS + SUSCEPTIBILITY OF ARMY M THREE DIFFERENT METHODS OF USING THE EMRE FACILITY FIBER OPTICS DATA LINKS FOR OPSEC COMMUNICATIONS + AUTOMATED CONTROL OF TEST ITEM FUNCTION WERE INVESTIGATED. ALSO, METHODS OF INTERFACING THE EMRE WERE INVESTIGATED.					DEC 84
D 82 5071 81	BINARY MUNITIONS PRODUCTION TEST METHODOLOGY THIS TASK HAS BEEN DELAYED PENDING THE RELEASE OF FY83 FUNDS.					DEC 84
D 82 5071 90	TOXIC GAS ANAL 8Y GAS CHROMATOGRAPHY THE PROTOTYPE HEATING + FLUSHING SYSTEM HAS BEEN CHECKED OUT NECESSARY MUDS ARE UNDER WAY. TO ALLEVIATE KNOWN PROBLEMS, SPECIAL WINDOWS + POLYETHYLENE VALVES + FITTINGS HAVE BEEN ORDERED.				DEC 84	DEC 84
D 82 5071 92	EFFECTS OF RAIN + VEGETATION ON FUZES + IMPACT SWITCHES DUE TO THE REDUCTION OF FY83 FUNDING THIS TASK HAS BEEN DELAYED.					DEC 84
D 82 5071 95	RAPID EVALUATION OF ENVIRONMENTAL HAZARDS WORK CONTINUED ON THE PREPARATION OF A COMPREHENSIVE RPT. DEALING WITH RATE + PERSISTENCE OF GB + VX IN SOIL, WATER + VEGETATION. SEVERAL CROPS OF BEANS WERE GROWN + HARVEST IN THIS TIME PERIOD. EXTRACTS WERE MADE FROM VARIOUS PLANTS + SPIKED WITH QL					DEC 84
D 82 5071 96	CALIBRATION PROCEDURES FOR TV TRACKING SYSTEM FIELD DATA ACQUIRED + STATISTICALLY EVALUATED. MODIFIED CAL. TECH. HAVE BEEN PROPOSED INCLUDING IMPROVED INSTRUMENTATION PROCEDURES + DATA REDUCTION TECHNIQUES. THIS PROJECT IS CURRENTLY ON HOLD AWAITING FY83 FUNDING.					DEC 84
D 82 5071 97	IMP METH FOR PERFORMANCE TESTING MORTARS AT EXTREME TEMP PRELIMINARY CHAMBER SPECIFICATIONS HAVE BEEN OUTLINED. ADDITIONAL MEETINGS WITH ARTILLERY WEAPONS SPECIALIST WILL BE NECESSARY TO DEVELOP A FINAL DESIGN.				DEC 84	DEC 84



**AVIATION
RESEARCH AND DEVELOPMENT COMMAND
(AVRADCOM)
AND
TROOP SUPPORT AND AVIATION
MATERIEL READINESS COMMAND
(TSARCOM)**

AVIATION R+D COMMAND AND TROOP SUPPORT AND AVIATION MR COMMAND

CURRENT FUNDING STATUS, 2ND CY82

FISCAL YEAR	NO. OF PROJECTS	AUTHORIZED FUNDS (\$)	* * C O N T R A C T A L L O C A T E D (\$)	* * F U N D I N G E X P E N D E D (\$)	* * I N H O U S E R E M A I N I N G (\$)	* * F U N D I N G E X P E N D E D (\$)
77	2	207,600	161,700	161,700 (100%)	45,900	45,700 (99%)
78	1	425,000	375,000	375,000 (100%)	50,000	50,000 (100%)
79	1	399,000	350,000	9,100 (2%)	49,000	49,000 (100%)
80	3	573,000	503,700	225,500 (44%)	69,300	69,200 (99%)
81	17	4,981,300	3,793,000	3,207,500 (84%)	1,188,300	862,000 (72%)
82	23	21,443,300	17,659,600	2,225,700 (12%)	3,783,700	1,017,500 (26%)
TOTAL	47	28,029,200	22,843,000	6,204,500 (27%)	5,186,200	2,093,400 (40%)

AUTHORIZED FUNDING CONTRACT ALLLOCATED 81% INHOUSE REMAINING 18%

MANUFACTURING METHODS AND TECHNOLOGY PROGRAM
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PROJ NO.	TITLE + STATUS	AUTHORIZED RIZED (\$000)	CONTRACT VALUES (\$000)	EXPENDED LABOR AND MATERIAL (\$000)	ORIGINAL PROJECTED COMPLETE DATE	PRESENT PROJECTED COMPLETE DATE
1 78 7036	ISOTHERMAL ROLL-FORGING OF COMPRESSOR BLADES TEST BLADES MUST BE REMORKED BEFORE ROOT MACHINING. AFTER REMORK AND EVALUATION BLADES WILL BE TESTED AT AVCO.	425.0	375.0	50.0	JUN 79	JUN 83
1 81 7036	ISOTHERMAL ROLL-FORGING OF COMPRESSOR BLADES TEST BLADES MUST BE REMORKED BEFORE ROOT MACHINING, EVALUATION AND TESTING CAN PROCEED.	190.2	124.4	56.1	NOV 82	NOV 83
1 77 7108	MANUFACTURING TECHNIQUES FOR TRANSMISSION SHAFT SEALS ***** DELINQUENT STATUS REPORT *****	135.0	111.7	23.5	AUG 79	JUN 83
1 81 7108	MANUFACTURING TECHNIQUES FOR TRANSMISSION SHAFT SEALS ***** DELINQUENT STATUS REPORT *****	100.0	89.5	10.5	JUN 82	JUN 83
1 82 7113	COMPOSITE REAR FUSELAGE (CRF) MANUFACTURING TECHNOLOGY ALL TOOL PROOFING COMPONENTS HAVE BEEN FABRICATED AND DESTRUCTIVELY TESTED. A PROTOTYPE CRF HAS BEEN FABRICATED, ASSEMBLED, AND INSTALLED IN THE GROUND TEST VEHICLE. STATIC TESTS WERE CONDUCTED AND DEMONSTRATED ACHIEVEMENT OF DESIGN LIMITS.	200.0	140.0	60.0	AUG 82	JUN 83
1 82 7119	NON-DESTRUCTIVE EVALUATION TECH FOR COMPOSITE STRUCTURES STATE-OF-THE-ART REVIEWS COVERING RADIOGRAPHY, ULTRASUNICS, AND ACOUSTIC EMISSION TECHNIQUES ARE IN PROCESS. SAMPLES FROM THE IMRB WERE CHARACTERIZED BY FTS-IR. ADDITIONAL PIEZOELECTRIC POLYMER ACOUSTIC EMISSION WERE RECEIVED.	500.0	105.0	212.2	NOV 83	NOV 83
1 81 7143	CERAMIC GAS PATH SEAL-HIGH PRESSURE TURBINE ***** DELINQUENT STATUS REPORT *****	280.0	248.0	32.0	FEB 83	JUN 83
1 82 7143	CERAMIC HIGH-PRESSURE GAS PATH SEAL ***** DELINQUENT STATUS REPORT *****	455.0	406.7	48.3	FEB 83	JUN 83
1 80 7155	COST EFFECTIVE MANUFACTURING METHODS FOR HELICOPTER GEARS INTERNATIONAL HARVESTER HAS INDICATED THAT THEY WILL DEFAULT ON THIS CONTRACT. CORRECTIVE ACTIONS ARE BEING EXPLORED.	160.0	142.0	18.0	JUL 81	DEC 82
1 81 7155	COST EFFECTIVE MANUFACTURING METHODS FOR HELICOPTER GEARS CONTRACT NEGOTIATIONS WITH A NEW CONTRACTOR TO REPLACE INTERNATIONAL HARVESTER WILL BE INITIATED.	320.0	84.0	84.0	MAR 84	JUL 84
1 80 7156	ULTRASONIC ASSISTED MACHINING FOR SUPERALLOYS PROJECT CONTINUES TO AWAIT AVAILABILITY OF SUITABLE EQUIP AT CORPUS CHRISTI ARMY DEPOT FOR MACHINING TRIALS.	60.0	42.7	17.3	APR 81	OCT 83
1 82 7197	FABRICATION OF INTEGRAL ROTORS BY JOINING INSPECTION SPECIFICATION AND MATERIAL PROPERTY DATA COMPLETED.	317.0	290.5	11.0	SEP 82	MAY 83

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1 81 7200	COMPOSITE ENGINE INLET PARTICLE SEPARATOR THE 150 HOUR ENDURANCE TEST IS IN PROCESS. THIS TEST WILL COMPLETE ALL WORK BUT THE FINAL REPORT.	500.0	348.0	144.0	OCT 81	JUN 83
1 81 7202	APPLICATION OF THERMOPLASTICS TO HELICOPTER SECONDARY STRUC THE REQUEST FOR ADDITIONAL FUNDING WAS APPROVED. ALL INNER AND OUTER SKINS FOR THE ACCESS DOOR HAVE BEEN FABRICATED, AND ARE READY FOR ASSEMBLY.	225.0	128.6	86.0	OCT 81	MAY 83
1 77 7238	PRECISION FORGED ALUMINIUM POWDER METALLURGY NO TECHNICAL WORK CARRIED OUT DURING THIS REPORTING PERIOD. CONTRACT IS BEING TERMINATED.	72.6	50.0	22.2	MAR 79	JUN 83
1 79 7238	PRECISION FORGED ALUMINIUM POWDER METALLURGY NO TECHNICAL WORK CARRIED OUT DURING THIS REPORTING PERIOD. CONTRACT IS BEING TERMINATED.	399.0	350.0	49.0	APR 81	JUN 83
1 82 7241	HOT ISOSTATIC PRESSED TITANIUM CASTINGS THE CAST MATERIAL AS PRESENTLY PROCESSED IS NOT SUITABLE FOR APPLICATION TO CRITICAL DYNAMIC COMPONENTS SUCH AS THE UH-60A MAIN ROTOR HUB. IT WAS DECIDED TO MINIMIZE EXPENDITURES UNTIL PROBLEM FULLY EXPLORED AND A DECISION TO REDIRECT OR TERMINATE.	450.0	308.9	23.5	JAN 83	FEB 83
1 80 7285	CAST TITANIUM COMPRESSOR IMPELLERS TODDLING AND PATTERS HAVE BEEN PROCURED FOR THE GMA500 SECOND STAGE IMPELLER. THE IMPELLER HAS BEEN REDESIGNED TO AVOID SECOND AND THIRD ORDER EXCITATION FREQUENCIES AT 102 PERCENT DESIGN SPEED.	353.0	319.0	33.9	SEP 81	DEC 82
1 81 7285	CAST TITANIUM COMPRESSOR IMPELLERS PROGRESS HAS BEEN DELAYED DUE TO OVERALL PROGRAM SLIPPAGE. THIS SLIPPAGE DUE TO MELTING STOCK UNAVAILABLE, SUBCONTRACTOR DELIVERY DELAYS AND MOLD FACE COAT COMPOSITION PROBLEMS.	174.0	110.0	64.0	OCT 81	DEC 82
1 82 7285	CAST TITANIUM COMPRESSOR IMPELLERS PROGRESS HAS BEEN DELAYED DUE TO OVERALL PROGRAM SLIPPAGE. THIS SLIPPAGE DUE TO MELTING STOCK UNAVAILABLE, SUBCONTRACTOR DELIVERY DELAYS AND MOLD FACE COAT COMPOSITION PROBLEMS.	350.0	171.0	25.9	MAR 84	DEC 82
1 82 7286	HIGH QUALITY SUPERALLOY POWDER PROD F/TURBINE COMPONENTS CONTRACT AWARD NOVEMBER 82. EFFORT INITIATED WITH INGOT PROCESSING BY EB REMELT.	360.0	300.0	23.0	APR 85	APR 85
1 81 7288	MMT DETERMINATION OF OPTIMAL CURING CONDITIONS PROCESSING CURE ANAL INCLUDING IDN GRAPHING, ACOUSTIC EMISSION + THERMOGRAPHY F/REINFORCED LAMINATES OF EM SP-250 DEG F CURE + NARMCO 5208 350 DEG F CURE PREPREGS IS NEARING COMPLETION. LAMINATES OF 14, 28, 56, + 112 PLIES ARE BEING TESTED.	175.0		143.0	AUG 82	DEC 83

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MANUFACTURING METHODS AND TECHNOLOGY PROGRAM
2ND SEMI-ANNUAL SUBMISSION CY 82 RCS DRCMT-301

PROJ NO.	TITLE + STATUS	AUTHO- RIZED (\$DDD)	CONTRACT VALUES (\$DDD)	EXPENDED LABOR AND MATERIAL (\$DDD)	ORIGINAL PROJECTED COMPLETE DATE	PRESENT PROJECTED COMPLETE DATE
1 81 7291	TITANIUM POWDER METAL COMPRESSOR IMPELLER SUBCONTRACTOR HAS COMPLETED A COMPLETE REDESIGN AND FABRICATION OF NEW FLUID DIES TO MAKE IMPELLERS. CONSOLIDATION SOURCE FOUND INADEQUATE. NEW SOURCE WILL BE FOUND AND CONSOLIDATION WILL BE ACCOMPLISHED BY 31 DEC 82.	229.1	200.0	29.1	JAN 83	NOV 83
1 82 7291	TITANIUM POWDER METAL COMPRESSOR IMPELLER DELAY IN FY81 PROJECT CAUSED DELAY IN CONTRACT OBLIGATION UNTIL FY83.	275.0	210.0	27.0	MAR 84	APR 83
1 81 7298	HIGH TEMPERATURE VACUUM CARBURIZING PHASE I PROCESS DEVELOPMENT IS BEING CONTINUED. SET UP OF THE BOEING-VERTOL THREE GEAR ROLLER, AND SINGLE TOOTH BENDING TESTERS HAS BEEN COMPLETED AND WILL BE OPERATIONAL WHEN TEST SPECIMENS BECOME AVAILABLE.	75.0	50.0	14.8	DEC 81	MAR 83
1 82 7298	HIGH TEMPERATURE VACUUM CARBURIZING CONTRACT HAS BEEN AWARDED TO BOEING-VERTOL. THE SERVICES OF PROFESSOR HUGHES WERE OBTAINED TO DEVELOP THE VACUUM CARBURIZING CAPABILITY AT AMMRC.	240.0	180.5	24.5	APR 83	MAR 83
1 82 7300	IMPROVED LOW CYCLE FATIGUE CAST ROTORS COMPLETED STRESS SIMILARITY EVALUATION + INITIATED MATERIAL SCREENING TESTING.	480.0	425.0	40.0	JUN 85	JUL 85
1 81 7319	PROD METH F/DIGITAL ADDRESSABLE MULTI-LEGEND DISPLAY SWITCH ***** DELINQUENT STATUS REPORT *****	50.0		40.0	OCT 83	DEC 84
1 81 7322	LOW COST TRANSPIRATION-COOLED COMBUSTOR LINER WORK PROGRESSING ON SCHEDULE FOR CLEANING SURFACE PREP AND ETCHING AND BONDING TESTS FOR FIVE MATERIALS - INCONEL 617, HASTELLOY X, HDA 230, INCONEL 586, AND HASTALLOY C276.	125.0	85.0	40.0	SEP 81	MAR 83
1 82 7322	LOW-COST TRANSPIRATION-COOLED COMBUSTOR LINER CONTRACT WAS AWARDED 30 APRIL 1982. NO FY82 FUNDS HAVE YET BEEN EXPENDED.	530.0	460.0	44.0	MAR 85	JUL 84
1 82 7340	COMPOSITE MAIN ROTOR BLADE A CONTRACT FOR PHASE 3 WAS ISSUED. A SAFETY OF FLIGHT REVIEW, GROUND TESTING, FLIGHT TESTING, AND ROOT END FATIGUE TESTING WERE COMPLETED. FLIGHT TESTING RESULTED IN EXCESSIVE VIBRATION AT 80% OF FULL FLIGHT ENVELOPE. FATIGUE TESTING WAS SUCCESSFUL.	1,200.0	1,052.0	148.0	NOV 82	MAY 83
1 81 7341	STRUCTURAL COMPOSITES FABRICATION GUIDE DATA GATHERING IS CONTINUING. A DEMONSTRATION OF COMPOSITE STRUCTURE FABRICATION TECHNIQUES WAS PRESENTED AT AVRADCOM.	73.0	50.0	23.0	JAN 82	JUN 83

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PROJ NO.	TITLE + STATUS	AUTHO- RIZED (\$000)	CONTRACT VALUES (\$000)	EXPENDED LABOR AND MATERIAL (\$000)	ORIGINAL PROJECTED COMPLETE DATE	PRESENT PROJECTED COMPLETE DATE
1 82 7342	PULTRUSION OF HONEYCOMB SANDWICH STRUCTURES THE STOP WORK ORDER ON THE CONTRACT IS STILL IN EFFECT. THE CONTRACTOR HAS SUBMITTED A REVISED SOW AND COST SUMMARY FOR COMPLETING PHASE 1. A MEETING WITH THE CONTRACTOR IS PLANNED FOR JAN 83. PHASE 2 HAS BEEN CANCELLED.	84.0	67.0	5.4	APR 84	SEP 83
1 81 7351	COMPOSITE SHAFTING FOR TURBINE ENGINES AN END OF PHASE 1, MANUFACTURING PROCESS ESTABLISHMENT, WAS CONDUCTED. TEST RESULTS WERE FAVORABLE, AND PHASE 2 WILL BE INITIATED.	300.0	250.0	40.0	OCT 81	JUN 83
1 82 7351	COMPOSITE SHAFTING FOR TURBINE ENGINES PROJECT WORK WAS INITIATED 1 DEC 82.	325.0		55.0	SEP 83	JUL 84
1 82 7366	SPIRAL SELF-ACTING SEALS ***** OELINQUENT STATUS REPORT *****	370.0		60.0	DEC 86	DEC 86
1 82 7371	INTEGRATED BLADE INSPECTION SYSTEM (IBIS) A PREPROTOTYPE XIM HAS BEEN DEVELOPED WHICH IS BEING USED TO ESTABLISH A BASELINE FOR RECOGNIZING AND ANALYZING FLAWS. SOFTWARE FOR BLADE ANALYSIS HAS STARTED.	500.0	500.0		SEP 84	SEP 84
1 81 7376	AUTO INSPECT AND PRECISION GRINDING OF S8 GEARS ***** OELINQUENT STATUS REPORT *****	215.0	184.5	30.5	DEC 84	JUN 83
1 82 7376	AUTO INSPECT AND PRECISION GRINDING OF S8 GEARS EQUIP HAS BEEN INSTALLED AND OEBUGGED. BASELINE MASTER GEARS WERE COMPARISON CHECKED ON ZEISS MACHINE AND THE GLEASON CONTACT PATTERN CHECKER. ANALYSIS OF COMPARISON UNDERWAY. DRAWINGS RELEASED + OPERATION SHEETS WRITTEN FOR SPECIMEN GEAR + PINION.	1,012.0	939.5	31.0	JUN 85	JUN 85
1 82 7382	LOW-COST COMPOSITE MAIN ROTOR BLADE FOR THE UH-60A CURRENT OUTER MOLD TOOLING WILL BE USED TO MOLD THE BLADES. FABRICATION HARDWARE IS BEING CONSTRUCTED. FABRICATION OF THE PROCESS DEVELOPMENT SPECIMENS (SHORT SPAR SECTIONS) IS NEARING COMPLETION. ALTERNATE APPROACH OF INTEGRALLY WINDING IN PROCESS.	2,895.3	2,775.3	82.0	JUN 83	SEP 83
1 82 7389	PRODUCTION OF ALUMINUM AIRFRAME COMPONENTS CONTRACT AWARDED 12/08/82 TO ROCKWELL INTL/HUGHES HELICOPTER.	280.0	210.0	48.6	MAR 85	MAR 85
1 82 7412	INFRARED DETECTOR FOR LASER WARNING RECEIVER ***** OELINQUENT STATUS REPORT *****	240.0	216.0	24.0	JUN 82	JUN 83
1 82 7415	MWT T700 BLISK REPAIR BLISKS FOR WELD AND HEAT TREAT WERE OBTAINED SO THAT A WELD REPAIR PROCEDURE COULD BE ESTABLISHED.	900.0	602.2	24.1	MAR 85	APR 85

MANUFACTURING METHODS AND TECHNOLOGY PROGRAM
 SUMMARY PROJECT STATUS REPORT
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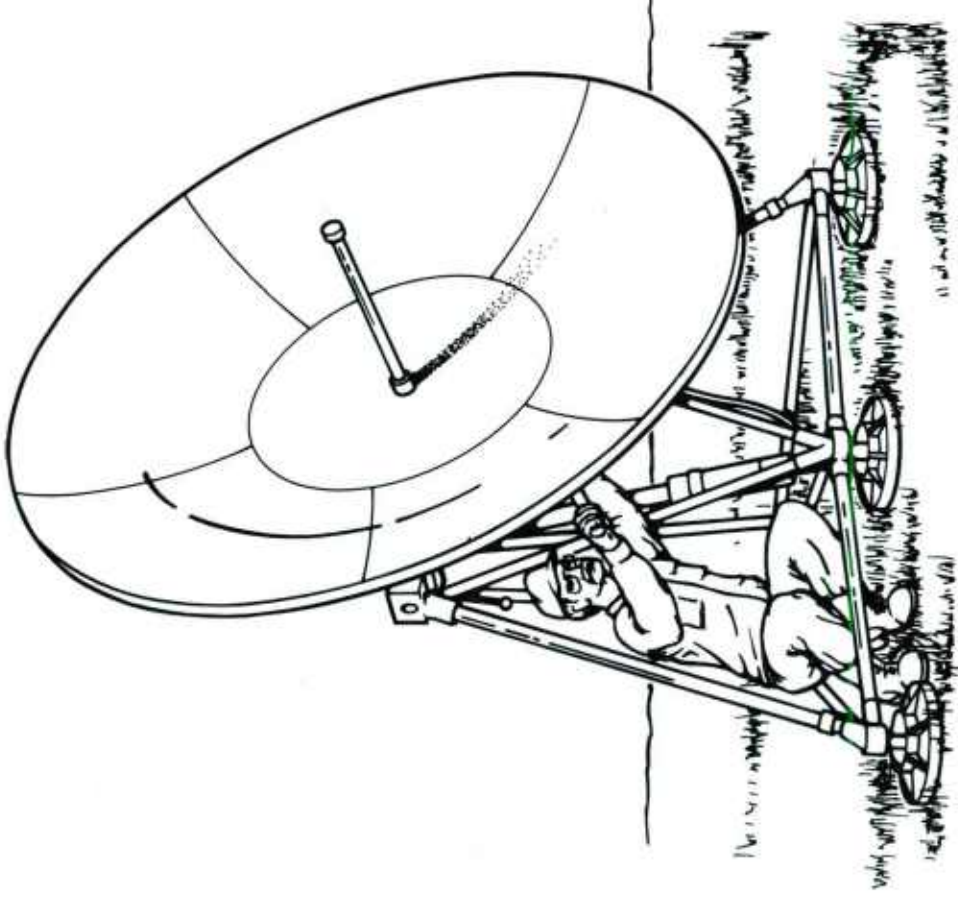
PROJ NO.	TITLE + STATUS	AUTHORIZED	CONTRACT VALUES	EXPENDED LABOR AND MATERIAL (\$000)	ORIGINAL PROJECTED COMPLETE DATE	PRESENT PROJECTED COMPLETE DATE
		(\$000)	(\$000)	(\$000)		

1 82 7426 MMT-IPI PROGRAM-MARTIN MARIETTA TAOS/PNVS
 ***** DELINQUENT STATUS REPORT *****

110.0

MANUFACTURING METHODS AND TECHNOLOGY PROGRAM
SUMMARY PROJECT STATUS REPORT
2ND SEMI-ANNUAL SUBMISSION CY 82 RCS DRCMT-3D1

PROJ NO.	TITLE + STATUS	AJTHD- RIZED (\$000)	CONTRACT VALUES (\$000)	EXPENDED LABOR AND MATERIAL (\$000)	ORIGINAL PROJECTED COMPLETE DATE	PRESENT PROJECTED COMPLETE DATE
7 81 8190	MMT IMPROVED BLISK-IMPELLER CUTTER LIFE TEST PARAMETER RANGES HAVE BEEN ESTABLISHED. TEST AND EVALUATION WILL BE ACCOMPLISHED DURING PHASE II (MMT 7 82 8190).	225.D	225.D		SEP 82	JUN 83
7 81 8192	TURBINE ENGINE PRODUCTIVITY IMPROVEMENT THIS PHASE COMPLETED IN MAY 1982. THIS IS THE FIRST OF A THREE PHASE EFFORT.	1,725.0	1,700.D	25.D	MAR 82	MAY 82
7 82 8192	TURBINE ENGINE PRODUCTIVITY IMPROVEMENT 3D MODEL ACQUIRED. REDESIGNED BALANCE ROOM INSTALLED. MAKE OR BUY ANALYSIS COMPLETED.	9,370.0	8,300.D		MAR 84	MAR 84



COMMUNICATIONS AND ELECTRONICS COMMAND (CECOM)

COMMUNICATIONS + ELECTRONICS COMMAND

CURRENT FUNDING STATUS, 2ND CY82

FISCAL YEAR	NO. OF PROJECTS	AUTHORIZED FUNDS (\$)	* #	C O N T R A C T A L L O C A T E D (\$)	F U N D I N G E X P E N D E D (\$)	* #	I N H O U S E R E M A I N I N G (\$)	F U N D I N G E X P E N D E D (\$)	* #
78	1	314,500		292,500	158,700 (54%)		22,000	24,000 (109%)	
79	1	550,000		497,000	450,000 (90%)		53,000	58,000 (109%)	
80	1	780,100		706,100	441,500 (62%)		74,000	69,000 (93%)	
81	4	3,770,300		2,913,600	729,500 (25%)		856,700	131,100 (15%)	
82	2	2,270,000		881,600	400,000 (45%)		1,388,400	42,000 (3%)	
TOTAL	9	7,684,900		5,290,800	2,179,700 (41%)		2,394,100	324,100 (13%)	

AUTHORIZED FUNDING CONTRACT ALLOCATED 69% INHOUSE REMAINING 31%

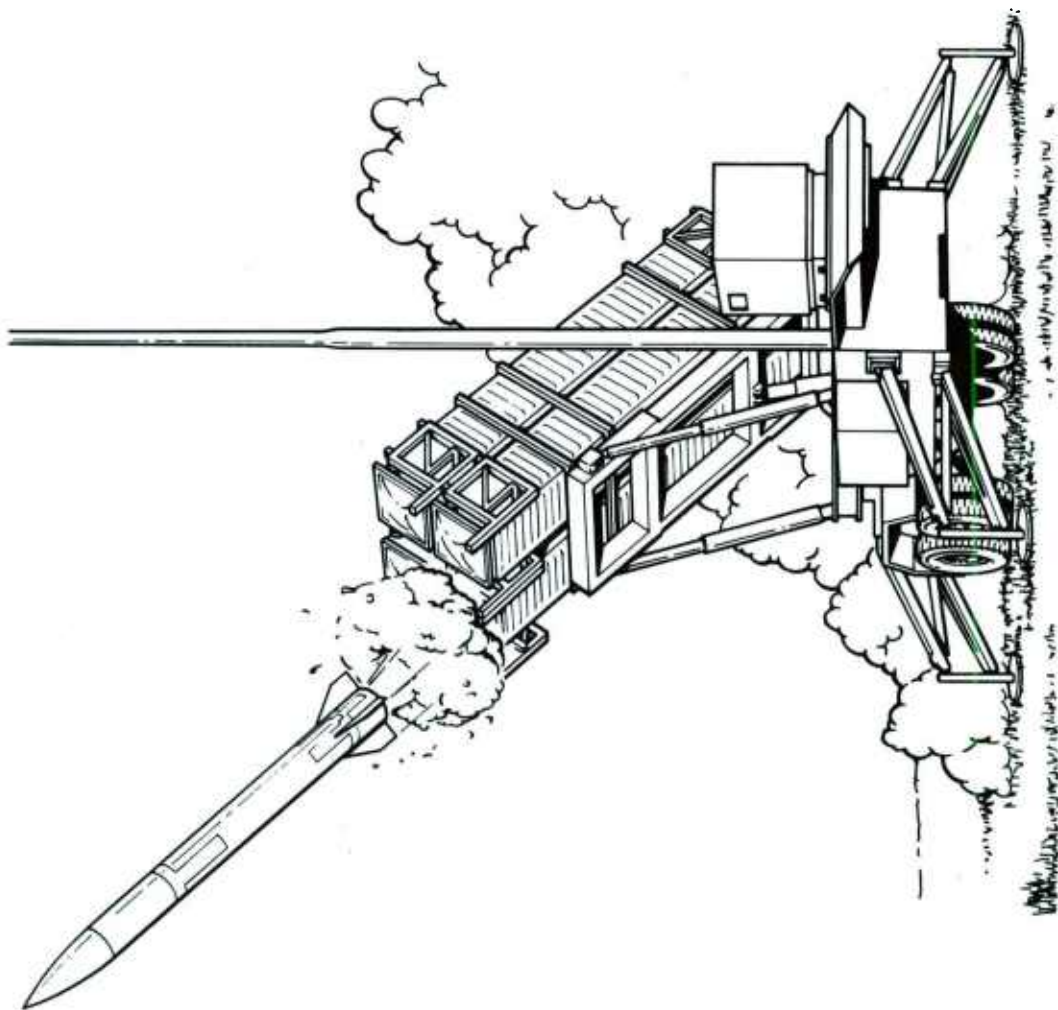
S U M M A R Y P R O J E C T S T A T U S R E P O R T
2ND SEMIANNUAL SUBMISSION CY 82 RCS DRMT-3D1

MANUFACTURING METHODS AND TECHNOLOGY PROGRAM

PROJ NO.	TITLE + STATUS	AUTHORIZED (\$000)	CONTRACT VALUES (\$000)	EXPENDED LABOR AND MATERIAL (\$000)	ORIGINAL PROJECTED COMPLETE DATE	PRESENT PROJECTED COMPLETE DATE
F 81 305D	EPITAXY OF III-V SEMICONDUCTOR PHOTODETECTORS SIX PROPOSALS WERE REVIEWED WITH HELP FROM THE AIR FORCE MATERIALS LAB. A FIRM WILL IMPROVE EQUIPMENT FOR PRODUCING III-V PHOTODETECTOR MODULES FOR SHORT + LONG HAUL FIBER OPTIC LINKS. TESTING WILL BE AUTOMATED.	670.0		9.6	DEC 83	APR 85
F 8D 3054	PRODUCTION METHODS FOR MULTI-LAYER FOLDED CIRCUITS HUGHES AUTOMATED FABRICATION METHODS FOR RIGID-FLEX MULTILAYER CIRCUIT BOARDS USED IN PLRS. OPTIMUM POLYIMIDE, EPOXY GLASS + KAPTON MATERIAL COMBINATIONS WERE EVALUATED. ENG SAMPLE TESTS WERE COMPLETED WITH POSITIVE RESULTS. NEW SPEC UNDER REVIEW.	78D.1	7D6.1	69.0	SEP 82	JUN 83
F 81 3056	ELECTROLUMINESCENT NUMERIC MODULES ROCKWELL COLLINS IS DEVELOPING PROCESSES FOR DEPOSITING THIN FILMS, ATTACHING DRIVE CIRCUITS, + HANDLING MASKS AUTOMATICALLY FOR ELECTROLUMINESCENT DISPLAYS. IC CHIP BONDING AND HERMETIC SEALING WERE DONE. A LINE TO BUILD 10000 UNITS/MD. IS NEEDED.	771.8	662.8	44.0	DEC 82	MAR 84
F 81 3057	HIGH STABILITY VIBRATION RESISTANT QUARTZ CRYSTALS FREQUENCY ELECTRONICS INC SET UP X-RAY, ANGLE CORRECTION PROCEDURES, METALLIZATION, BONDING AND FLATPAC PACKAGING METHODS. HAVE CLEANING, GOLD PLATING FOR FREQUENCY CONTROL, VACUUM BAKE AND SEALING STATIONS. A CAROUSEL ACCOMMODATES 50 CRYSTAL HOLDERS	1,261.3	1,193.6	67.5	JUL 83	FEB 85
F 82 3073	TACTICAL GRAPHICS DISPLAY PANEL GTE ESTABLISHED AUTOMATED DEPOSITION PROCESS FOR THIN FILM ELECTROLUMINESCENT LAYERS ON 10"x12" MATRIX PANELS. COST WILL BE CUT BY OPTIMUM CLEANING, HANDLING, + SEALING TECHNIQUES. PANELS HAVE 64D COLUMNS AND 512 ROWS. HYBRID DRIVERS TO BE USED.	950.0	881.6	12.0	JCT 84	OCT 84
F 82 3083	MM WAVE COMMUNICATIONS FRONT END MODULE (CFEM) A FIRM WILL ESTABLISH PROCESSES TO BUILD MILLIMETER WAVE FRONT END MODULES FOR 36-38 GHZ OPERATION. INCLUDES DIODE SOURCE, BITE COUPLER, POWER ATTENUATOR, BAND-PASS FILTER, MIXER, OSCILLATOR SOURCE, + IF PRE-AMPLIFIER. FOR COMMAND POST RADIO.	1,320.0		30.0	JUN 84	AUG 85
F 81 9851	TACTICAL MINIATURE CRYSTAL OSCILLATORS BENDIX STARTED A TRADEOFF ANALYSIS TO FIND OPTIMUM PRODUCTION CONFIGURATION FOR RELIABILITY, PERFORMANCE AND COST. WILL INCLUDE RESONANCE EVALUATION, MATERIALS EVALUATION AND THERMAL CALCULATION. SPECIAL TOOLING AND PROTOTYPE MFG. TO START SOON.	1,067.2	1,057.2	10.0	MAR 84	FEB 85
2 78 9896	RUGGEDIZED TACTICAL FIBER OPTIC CABLES ITT SOLVED MANY PRODUCTION PROCESS PROBLEMS. THERE WERE 3 REVISIONS OF THE CONFIRMATORY TEST REPORT BEFORE ACCEPTANCE. ALL OPTICAL FIBER REQUIRED FOR PILOT RUN HAS BEEN PRODUCED + TESTED. PILOT PRODUCTION TURN-ON OF CABLES GIVEN IN JANUARY 83.	314.5	292.5	24.0	NOV 79	OCT 83

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F 79 9938	THREE COLOR LIGHT EMITTING DIODE DISPLAY UNIT ALL TECHNICAL WORK HAS BEEN COMPLETED. AN INDUSTRY DEMONSTRATION HAS BEEN PLANNED AND THE FINAL REPORT IS IN PROCESS.	550.0	497.0	58.0	SEP 81	MAR 83



MISSILE COMMAND (MICOM)

MISSILE COMMAND

CURRENT FUNDING STATUS, 2ND CY82

FISCAL YEAR	NO. OF PROJECTS	AUTHORIZED FUNDS (\$)	* * C O N T R A C T (\$)	* * F U N D I N G (\$)	* * I N H O U S E (\$)	* * F U N D I N G EXPENDED (\$)
78	1	300,000	12,700	12,700 (100%)	287,300	287,300 (100%)
79	1	400,000	200,000	200,000 (100%)	200,000	200,000 (100%)
80	4	2,077,000	1,525,100	1,319,700 (86%)	551,900	379,300 (68%)
81	12	8,958,600	6,178,200	5,152,100 (83%)	2,780,400	1,230,000 (44%)
82	13	8,669,500	5,890,200	1,803,200 (30%)	2,779,300	520,200 (18%)
TOTAL	31	20,405,100	13,806,200	8,487,700 (61%)	6,598,900	2,616,800 (39%)

AUTHORIZED FUNDING CONTRACT ALLOCATED 68% INHOUSE REMAINING 32%

MANUFACTURING METHODS AND TECHNOLOGY PROGRAM
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R 8D 1D18	IMPROVED MFG. PROCESSES FOR DRY TUNED ACCELEROMETERS (CAM) THIS PROJECT IS PHYSICALLY COMPLETE. AN END OF CONTRACT DEMONSTRATION IS SCHEDULED FOR MAR 29, 1983. THE TECHNICAL REPORT IS BEING PREPARED. FINAL TESTING IS UNDERWAY.	380.0	227.9	152.1	MAR 81	JUN 83
3 81 1D42	PRODUCTION OF COMPOSITE RADOME STRUCTURES EFFORTS TO PRODUCE THE FULL-SCALE RADOME ARE UNDERWAY. PART DESIGN + TOOLING DESIGN + FABRICATION ARE NEARLY COMPLETE. IN-PROCESS QUALITY CONTROL PROCESURES ARE BEING EVALUATED. OPTION. ON CONTRACT HAS BEEN EXTENDED TO ROGERS (TWO LAYER RADOME).	755.0	269.6	173.7	SEP 83	SEP 83
3 82 1O5D	LOW COST BRAIDED ROCKET MOTOR COMPONENTS THE FULL SCALE MOTOR CONCEPT AND REPRODUCIBILITY DEMONSTRATIONS HAVE BEEN ACCOMPLISHED. DELIVERY OF PRODUCTION COMPONENTS FOR TEST FIRING IS UNDERWAY.	475.0	337.2	31.0	APR 83	APR 83
3 81 1O51	REPLACEMENT OF ASBESTOS IN ROCKET MOTOR INSULATIONS THE EFFORT WILL ADDRESS REPLACEMENT OF ASBESTOS IN COMPOSITE GRAIN INHIBITORS, AND IN SMOKELESS, RUBBER BASE CALENDERED, AND CALENDERED ELASTOMERIC MOTOR INSULATORS. MATERIAL SELECTION AND TESTING IS IN PROCESS.	475.0	419.9	19.2	MAR 84	MAR 84
3 82 1D60	ELECTRICAL TEST AND SCREENING OF CHIPS TELEDYNE TAC IS IDENTIFYING CHIP TESTING METHODOLOGIES. APPLICABILITY OF BASELINE SYSTEM IS BEING EVALUATED. PROCESS MODEL EVALUATES TEMPERATURE OF A SILICON CHIP AS A FUNCTION OF TIME AND LOCATION. DATA IS BEING COLLECTED ON AIR FLOW WEAR CHIP.	750.0	646.6	46.4	OCT 83	SEP 83
3 81 1O72	MULTIPLE HIGH RELIABILITY/LOW VOLUME LSI MANUFACTURING (CAM) MICROELECTRONICS CORP COMPLETED WORK ON THE INDUSTRY SURVEY, PROCESSING PLAN, PHOTORESIST PROCESSES, MASK INVENTORY HANDLING, WAFER ETCHING, PATTERNING, MULTI-SOURCE DOPING, DIFFUSION, CHEMICAL VAPOR DEPOSITION + PROCESS CAM, FOR MAKING OBSOLETE ICS.	1,540.0	925.5	553.1	MAR 83	JUN 83
3 82 1O73	REAL TIME ULTRASONIC IMAGING THE MANIPULATOR DESIGN IS COMPLETE, AND CONSIDERABLE PROGRESS HAS BEEN MADE ON ALTERNATE TRANSDUCER DEVELOPMENT AND THE FABRICATION OF THE ISOMETRIC IMAGE PROCESSOR. IN SPITE OF MILESTONE DATA SHIFTS, PROGRESS IS CONSISTENT WITH EXPENDITURES.	960.0	839.3	120.6	JAN 84	JAN 84
3 81 1O75	ELECTRONICS COMPUTER AIDED MANUFACTURING (ECAM) BATTELLE DRAFTED A MASTER PLAN, WROTE PROJECT DESCRIPTIONS, PREPARED A MOVIE SCRIPT AND FINALIZED TO BE ARCHITECTURE. PHASE I FINAL REPORT WAS DRAFTED. PROJECT WILL FILL TECHNOLOGY VOID AND ADVANCE CAD/CAM/CAT OF ELECTRONICS ITEMS.	1,985.0	1,817.9	137.5	SEP 81	MAY 83

MANUFACTURING METHODS AND TECHNOLOGY PROGRAM
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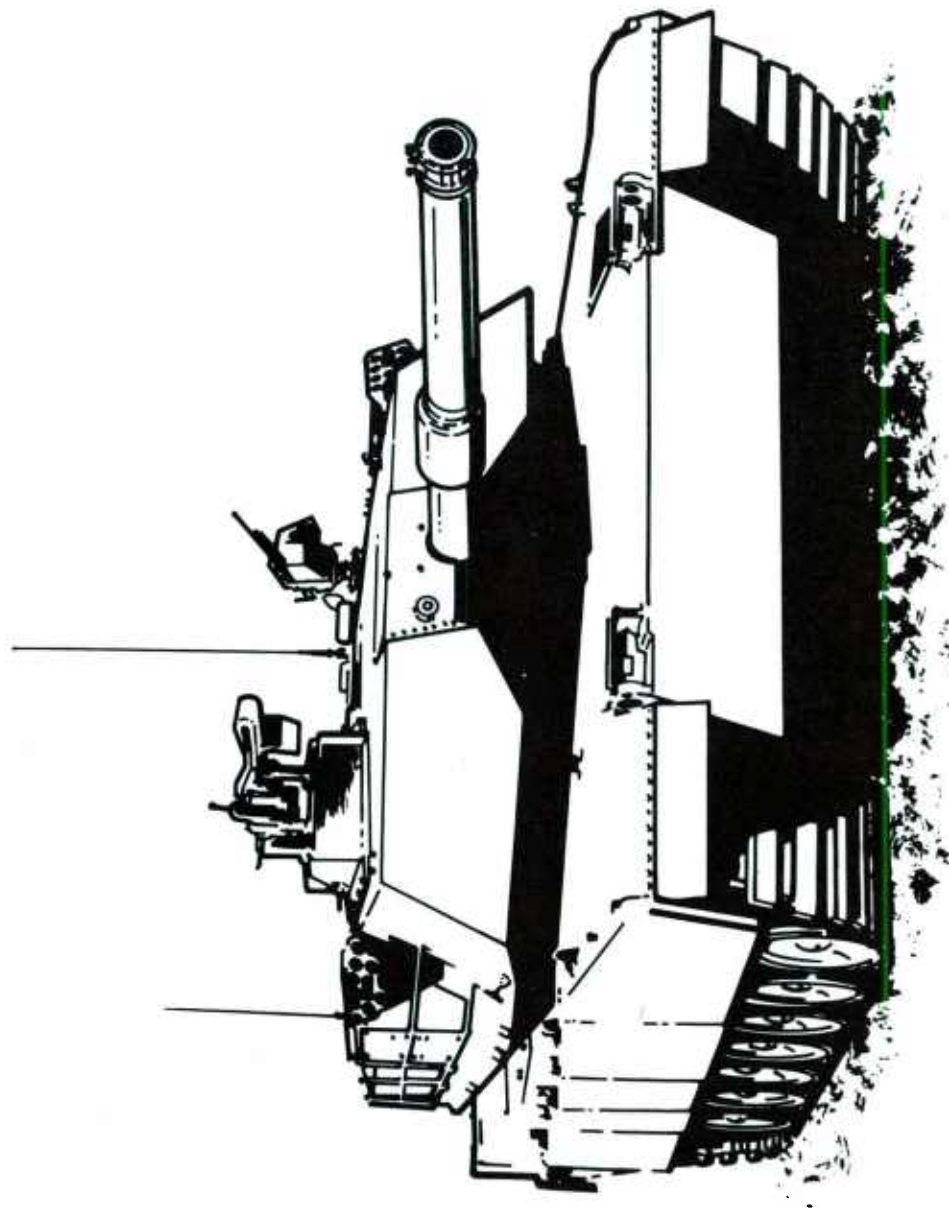
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3 82 1076	AUTOMATIC RECOGNITION OF CHIPS KULICKE + SOFFA BUILT PROTOTYPE HARDWARE FOR A SEMIAUTOMATIC CHIP RECOGNITION DIE BONDING SYSTEM VISUALIZED BY R 79 3219 + R 80 3219. SPAR ROBOT, PASSIVE COMPONENT FEEDERS, VIDEO AUGMENTATION SYSTEM, AND CHIP TRAY PEDESTALS ARE BEING EVALUATED.	700.0	495.8	60.9	FEB 84	FEB 84
3 82 1086	COBALT REPLACEMENT IN MARAGING STEEL-ROCKET MOTOR COMPONENTS TASKS ONE AND TWO ARE UNDERWAY AND ON SCHEDULE. THIS PROJECT IS THE SECOND OF A TWO PHASE EFFORT.	655.0	605.1	28.0	MAY 83	MAY 83
3 81 1088	OPTIMIZED MANDREL FAB + UTILIZATION F/COMPOSITE MOTOR CASES STRUCTURAL REQMS FOR BOTH THE MET(NET) AND INFLATABLE REUSABLE CASE MANDRELS DETERMINED FROM SUBSCALE TESTING. DESIGN FOR MET FULL SCALE MANDREL OPTIMIZED. HOWEVER, BECAUSE OF PROBLEMS OBTAINING SUITABLE MATERIALS, DESIGN OF MET MANDREL CONTINUING.	700.0	558.7	89.9	DEC 82	APR 83
3 82 1088	OPTIMIZED MANDREL FAB + UTILIZATION F/COMPOSITE MOTOR CASES WORK FINISHED PENDING RECEIPT OF TECHNICAL REPORT FROM TECHNICAL INFORMATION DIVISION.	400.0	305.2	73.6	MAY 83	MAY 83
3 82 1108	RF AND LASER HARDENING OF MISSILE DOMES BATTLE WORKED ON DEPOSITION OF A THIN CONDUCTIVE NICKEL COATING ON A COPPERHEAD NOSECONE. NICKEL WAS ELECTROPLATED ON THE THREADED AREA. A FINE MESH GRID WAS BONDED TO THE COATED NOSECONES. THIS PROTECTS THE INTERNAL CIRCUITRY FROM RF ENERGY.	400.0	200.0	98.0	MAY 82	MAY 83
3 82 1109	RUBOTIZED WIRE HARNESS ASSEMBLY SYSTEM BOEING WAS AWARDED THE CONTRACT FOR THIS EFFORT ON 9 SEP 82. CONTRACT IS 30 MONTHS WITH A COMPLETION DATE OF 9 MAR 85. THE PROJECT WILL RESULT IN A REDUCTION IN WIRE HARNESS ASSEMBLY COST AS A RESULT OF REDUCING LABOR REQMS + IMPROVED PRODUCTIVITY.	1,500.0	993.3		SEP 83	SEP 83
3 82 1121	MISSILE MANUFACTURING PRODUCTIVITY IMPROVEMENT PROGRAM THE OPTIONS FOR THIS PHASE II PORTION WILL NOT BE EXERCISED UNTIL THE PHASE I PORTION IS COMPLETED AT RUCKWELL AND MARTIN. FOLLOW-ON ACTIONS WERE DELAYED BY THE HELFIRE OFFICE PENDING IMPLEMENTATION OF DUAL-SOURCE ALL-UP ROUND PROCUREMENT STRATEGY.	1,000.0			JUN 83	DEC 83
3 82 1126	MOUND ELASTOMER INSULATOR PROCESS PRELIMINARY PHYSICAL AND PROCESS PROPERTIES TESTING ON VARIOUS INSULATOR FORMULATIONS WERE COMPLETED BY HERCULES. MICROWAVE COCURE SCREENING EVALUATED INSULATORS WHICH WERE WOUND ONTO A METAL MANDREL AND THEN OVERWRAPPED WITH KEVLAR/EPOXY CASES.	650.0	559.2	3.9	APR 84	APR 84
3 80 3115	ENGINEERING FOR METROLOGY AND CALIBRATION ***** DELINQUENT STATUS REPORT *****	747.0	420.0	207.0	DEC 81	JUN 83

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3 81 3115	ENGINEERING FOR METROLOGY AND CALIBRATION ***** DELINQUENT STATUS REPORT *****	661.0				
3 82 3115	ENGINEERING FOR METROLOGY AND CALIBRATION ***** DELINQUENT STATUS REPORT *****	150.0				
3 81 3139	MILLIMETER SEEKERS FOR TERMINAL HOMING (TH) TESTING OF PROTOTYPE UNIT IS COMPLETE. PILOT LINE FABRICATION AND ANALYSIS IS COMPLETE. FIVE PRODUCTION UNITS HAVE BEEN FABRICATED. INDUSTRY DEMO IS COMPLETED. WORK IS CONTINUING ON MOTION PICTURE AND FINAL REPORT. COST FOR MMW FRONT END IS DROPPING.	1,317.6	1,242.6	75.0	SEP 82	DEC 83
R 80 3142	PRODUCTION METHODS FOR LOW COST PAPER MOTOR COMPONENTS ALL TECHNICAL WORK IS COMPLETE. DRAFT TECHNICAL REPORT CIRCULATED. FINAL TECHNICAL REPORT AND FINAL 301 REPORT WILL BE DISTRIBUTED DURING NEXT REPORTING PERIOD.	200.0	179.8	20.2	JUN 82	APR 83
R 78 3218	REDUCE THE FINISHING COST OF FUSED SILICA RADOMES THE MATCHED DIE MOLD WAS DEVELOPED FOR PRODUCING PATRIOT SIZED RADOME BLANKS. CASTINGS WERE FIRED AND SHRINKAGE WAS MINIMAL AND WITHIN TOLERANCES. THIS PROJECT IS COMPLETE EXCEPT FOR THE FINAL REPORT WHICH IS BEING PREPARED.	300.0	12.7	287.3	OCT 79	SEP 83
3 81 3263	PRINTED WIRING BOARDS UTILIZING LEADLESS COMPONENTS HUGHES AIRCRAFT CO SELECTED CERMALLOY SN63 SOLDER PASTE, RMA FLUX, AND SEVERAL ADHESIVES, AND VAPOR PHASE SOLDERING TO ATTACH LEADLESS CHIP CARRIERS TO PRINTED WIRING BOARDS. PLATED THRU HOLES IN THE BOARDS WERE SOLDER FILLED TO AID HEAT FLOW.	400.0	169.8	19.0	OCT 83	OCT 83
3 81 3294	PRODUCTION PROCESSES FOR ROTARY ROLL FORMING TECHNICAL EFFORT IS COMPLETE. FINAL REPORT IS ROUGH DRAFT APPROVED AND WILL BE DISTRIBUTED DURING NEXT REPORTING PERIOD.	175.0	132.4	42.6	JUN 82	SEP 82
R 80 3376	TESTING OF ELECTRO-OPTICAL COMPONENTS AND SUBSYSTEMS THE HARDWARE WAS ASSEMBLED IN MODULES AND CHECKED OUT ONE SECTION AT A TIME. MANY TECHNICAL DIFFICULTIES WERE ENCOUNTERED. PROBLEMS WITH MAGNIFICATION WERE SOLVED WITH USE OF A SAMPLE TEST PATTERN WRITTEN DIRECTLY ON FILM.	750.0	697.4		JUN 81	MAR 83
3 82 3411	NON-PLANAR PRINTED CIRCUIT BOARDS ANTENNA - MACHINING OF THE DATUM CONTROL FEATURES IS COMPLETE. SAMPLE RADIATION PATTERNS HAVE BEEN TAKEN. CIRCUIT BOARD - FABRICATION OF ADDITIONAL CYLINDRICAL BOARDS WAS STARTED. AN ALTERNATIVE CONFIGURATION IS BEING DISCUSSED.	550.0	533.2	16.8	OCT 83	OCT 83

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SUMMARY PROJECT STATUS REPORT
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PROJ NO.	TITLE + STATUS	AUTHORIZED (\$000)	CONTRACT VALUES (\$000)	EXPENDED LABOR AND MATERIAL (\$000)	ORIGINAL PROJECTED COMPLETE DATE	PRESENT PROJECTED COMPLETE DATE
3 81 3423	LOW COST/HIGH PERFORMANCE CARBON-CARBON NOZZLES THE INTERIM TECH REPORT HAS BEEN COMPLETED AND IS BEING DISTRIBUTED. THE EFFORT WILL CONTINUE UNDER PROJECT NUMBER 3 82 3423.	300.0	281.6	15.5	JUN 82	JUN 82
3 82 3423	LOW COST/HIGH PERFORMANCE CARBON-CARBON NOZZLES CANOIOATE SELECTION AND CONCEPT DEMONSTRATION HAVE BEEN COMPLETED. CONCEPT REFINEMENT AND REPRODUCIBILITY TESTING HAVE BEEN INITIATED. PLANS FOR A FULL SCALE MOTOR NOZZLE DEMONSTRATION ARE UNDERWAY.	479.5	375.3	41.0	JUL 83	JUL 83
R 79 3441	APPLICATION OF HIGH ENERGY LASER MANUFACTURING PROCESSES ALL WORK HAS BEEN ACCOMPLISHED. AWAITING THE FINAL TECHNICAL REPORT.	400.0	200.0	200.0	SEP 79	JUN 80
3 81 3445	PRECISION MACHINING OF OPTICAL COMPONENTS THIS PROJECT IS ALMOST COMPLETE. THE FINAL REPORT IS BEING PREPARED.	400.0	360.2	15.0	JUN 82	AUG 83
3 81 3449	ALTERNATE PROCESS FOR IPDI NOTHING REPORTED.	250.0		89.5		DEC 83



**TANK-AUTOMOTIVE COMMAND
(TACOM)**

TANK - AUTOMOTIVE COMMAND

CURRENT FUNDING STATUS, 2ND CY82

FISCAL YEAR	NO. OF PROJECTS	AUTHORIZED FUNDS (\$)	* * C O N T R A C T A L L O C A T E D (\$)	* * F U N D I N G E X P E N D E D (\$)	* * I N H O U S E R E M A I N I N G (\$)	* * F U N D I N G E X P E N D E D (\$)
77	1	500,000	356,600	302,400 (84%)	143,400	26,600 (18%)
77	1	750,000	742,200	742,200 (100%)	7,800	0 (0%)
78	4	3,741,500	3,135,800	2,578,800 (82%)	605,700	605,100 (99%)
79	4	2,436,000	573,200	509,200 (88%)	1,862,800	366,800 (19%)
80	6	2,978,400	1,194,400	1,155,400 (96%)	1,784,000	134,900 (7%)
81	17	7,493,000	2,411,300	1,727,100 (71%)	5,081,700	791,000 (15%)
82	26	8,771,000	3,020,700	1,200,900 (39%)	5,750,300	636,500 (11%)
TOTAL	59	26,669,900	11,434,200	8,216,000 (71%)	15,235,700	2,560,900 (16%)

AUTHORIZED FUNDING CONTRACT ALLOCATED 43% INHOUSE REMAINING 57%

MANUFACTURING METHODS AND TECHNOLOGY PROGRAM
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E 77 3749	HYDRAULIC ROTARY ACTUATORS ORIGINAL ACTUATORS TESTED. FOUR ADDITIONAL ACTUATORS WERE COMPLETED AND TESTED. PRODUCTIBILITY PLAN AND CRITICAL ITEM SPECS HAVE BEEN DELIVERED. TDP IS COMPLETE PENDING AN ECP TO MAKE MINOR MODIFICATIONS.	750.0	742.2		MAY 79	JUL 83
E 80 3749	HYDRAULIC ROTARY ACTUATORS ORIGINAL ACTUATORS TESTED. FOUR ADDITIONAL ACTUATORS WERE COMPLETED AND TESTED. PRODUCTIBILITY PLAN AND CRITICAL ITEM SPECS HAVE BEEN DELIVERED. TDP IS COMPLETE PENDING AN ECP TO MAKE MINOR MODIFICATIONS.	145.0	133.9		DEC 81	JUL 83
E 81 3749	HYDRAULIC ROTARY ACTUATORS FOR M9 ORIGINAL ACTUATORS TESTED. FOUR ADDITIONAL ACTUATORS WERE COMPLETED AND TESTED. PRODUCTIBILITY PLAN AND CRITICAL ITEM SPECS HAVE BEEN DELIVERED. TDP IS COMPLETE PENDING AN ECP TO MAKE MINOR MODIFICATIONS.	157.0	150.0		JUL 81	JUL 83
T 78 4264	TRACK INSERTS AND FILLERS FOR TRACK RUBBER PAOS TORSION TEST MACHINE NOW COMPLETED AND INSTALLED. QUALIFICATION TESTING IS UNDERWAY. A FINAL 301 IS BEING PREPARED AND SHOULD BE COMPLETED BY APRIL, 1983.	520.0	233.8	286.2	JAN 81	APR 83
4 7T 4568	TECHNICAL DATA/CONFIGURATION MANAGEMENT SYSTEM (TD/CMS) ***** DELINQUENT STATUS REPORT *****	500.0	356.6	26.6	JUN 79	JUN 83
T 79 4575	LASER WELDING TECHNIQUES FOR MILITARY VEHICLES PRODUCTION MOCK-UP USING M1 TURRET RING CASTING TO INNER TURRET WALL COMPLETED. BALLISTIC TEST PLATES PREPARED. TESTING PERFORMED AND PRELIMINARY RESULTS POSITIVE.	450.0	280.0	170.0	JUL 81	MAR 83
T 82 4575	LASER WELDING TECHNIQUES FOR MILITARY VEHICLES CONTRACT TO BE AWARDED SOON. PLANNED CONTRACT LETTING APRIL 83.	275.0			OCT 84	OCT 84
T 79 5002	FABRICATING TORSION SPRINGS FROM HIGH STRENGTH STEELS PRELIMINARY ANALYSIS OF FATIGUE LIFE SHOWS E4350 STEEL IS OUTPERFORMING E4150.	150.0	89.2	60.8	FEB 81	DEC 83
T 82 5002	FABRICATION OF TORSION BARS FROM HIGH STRENGTH STEEL PRELIMINARY ANALYSIS OF FATIGUE LIFE SHOWS E4350 STEEL IS OUTPERFORMING E4150.	77.0	66.0	5.0	DEC 83	DEC 83
T 82 5005	COMPUTER AIDED DESIGN FOR COLO FORGED GEARS (PHASE 1) THE DATA SECTION OF THE COMPUTER PROGRAM THAT HANDES BOTH SPAR AND HELICAL GEAR GEOMETRIES HAS BEEN COMPLETED. THE DRAWING ROUTINES WERE MODIFIED.	306.0	256.0	19.0	JAN 84	JAN 84

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T 82 5014	FOUNDRY CASTING PROCESSES USING FLUID FLOW + THERM ANALYSIS. OF PITTSBURGH WAS AWARDED A CONTRACT TO EXPAND THE GEOMETRIC CAPABILITIES OF THE CURRENT SYSTEM. PRESENTATIONS ON THE RESULTS HAVE BEEN MADE TO WEAPON SYSTEM DESIGNERS AND FOUNDRY REPRESENTATIVES.	100.0	80.0	10.0	MAR 84	DEC 83
T 82 5019	STORAGE BATTERY LOW MAINTENANCE PROTOTYPE BATTERIES FROM CONTRACTOR HAVE BEEN DELIVERED TO TACOM FOR LABORATORY AND FIELD TESTS. TEST PROGRAMS AND SCHEDULING FOR LABORATORY AND FIELD TESTS HAVE BEEN COMPLETED. THIS IS A CONTINUATION OF 5815D19 AND IS PHASE III.	90.0		52.0	JAN 84	DEC 83
T 82 5024	GEAR DIE DESIGN + MFG UTILIZING COMPUTER TECHNOLOGY (CAM) THE SCRIPT FOR THE MOVIE ON THE CAD/CAM OF SPIRAL BEVEL GEARS HAS BEEN PREPARED WITH NARRATION + SUGGESTED SCENES. THE CONTRACTOR HAS PROPOSED TO FORGE IN PHASE III A LARGE SPIRAL BEVEL GEAR.	200.0	150.0	10.0	OCT 83	APR 84
T 80 5045	SPALL SUPPRESSIVE ARMOR FOR COMBAT VEHICLES (PHASE II) PROJECT STATUS REPORT WAS SENT BACK TO TACOM FOR CORRECTION. THE DESCRIPTION OF ACCOMPLISHMENTS WAS INCOMPLETE.	86.0	56.0	30.0	NOV 81	AUG 83
T 82 5053	FABRICATION TECHNIQUES FOR HI STRENGTH STRUCTURAL CERAMICS A SOLE SOURCE CONTRACT WAS AWARDED TO CUMMINS ENGINE CO., AND THE ROLE OF AMMRC WAS ORGANIZED. PROJECT WORK WAS INITIATED.	500.0	340.0	110.0	JUN 83	FEB 84
T 81 5054	LASER SURFACE HARDENED COMBAT VEHICLE COMPONENTS HEAT TREATING AND TEST EVALUATION OF SAMPLE PARTS CONTINUE. FIXTURES TO HOLD THE T-142 AND T-156 END CONNECTORS HAVE BEEN DESIGNED AND FABRICATED. CNC EQUIPMENT WILL CONTROL THE ROTATION OF THE COMPONENTS UNDER THE LASER BEAM.	175.0	120.0	49.0	SEP 83	SEP 83
T 82 5054	LASER SURFACE HARDENED COMBAT VEHICLE COMPONENTS NON-SURFACE HARDENED END CONNECTORS AND CENTER GUIDES HAVE BEEN PURCHASED. COMPONENTS ARE BEING HEAT TREATED. LAB EVALUATION OF HEAT TREATED COMPONENTS IS IN PROGRESS.	170.0	123.0		JAN 84	JAN 84
T 82 5064	LIGHT WEIGHT SADDLE TANK (PHASE III) DURABILITY TESTING IS IN PROGRESS AT THE TROPIC TEST CENTER, YPG AND COLD REGION TEST SITE. ANOTHER TANK SHIPPED TO APG FOR TESTING. PREPARATIONS ARE UNDERWAY FOR TESTING A TANK ON AN M939 VEHICLE AT HOUGHTON, MI.	185.0	70.0	70.0	SEP 83	JUN 83
T 82 5067	PLASTIC BATTERY 80X ALL FIELD TESTING RESULTS HAVE BEEN EVALUATED. FINAL TECHNICAL REPORT FORWARDED TO PRINTING SHOP AND AWAITING DELIVERY FOR DISTRIBUTION. TOP CHANGES DELAYED BECAUSE ADDITIONAL DURABILITY FIELD TESTING REQUIRED.	70.0		38.0	DEC 82	JUN 83

MANUFACTURING METHODS AND TECHNOLOGY PROGRAM
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T 81 5068	NEW ANTI-CORROSIVE MATERIALS AND TECHNIQUES (PHASE II) THREE GALVANIZED, UNITIZED M151A2 VEHICLE BODIES WERE FABRICATED USING CURRENT PRODUCTION TOOLING, AND WERE ELECTROCOATED WITH EPOXY PRIMER. TWO OF THESE ARE CURRENTLY UNDERGOING ROAD TESTS TO DETERMINE CORROSION RESISTANCE AND STRUCTURAL INTEGRITY.	450.0	404.0	40.0	SEP 82	APR 83
T 81 5075	MILITARY ELASTOMERS FOR TRACK VEHICLES (PHASE II) T-152 TRACK PAD HAVE BEEN MADE AND TESTED. T-142 TRACK PADS HAVE BEEN MANUFACTURED AND ARE BEING TESTED. PROCUREMENT ACTIONS AND TESTING ARRANGEMENTS ARE BEING MADE FOR THE T-156 (ABRAMS M1) TRACK PADS. TRACK RUBBER SPEC WILL BE WRITTEN.	200.0	62.1	57.0	SEP 82	SEP 83
T 82 5075	MILITARY ELASTOMERS FOR TRACK VEHICLES (PHASE II) T-142 TRACK PADS CONTAINING KEVLAR FIBERS HAVE BEEN MANUFACTURED. TRACK RUBBER SPECIFICATION WILL BE WRITTEN TO ENCOMPASS IMPROVEMENTS. SPIN-OFFS FOR OTHER ELASTOMER ITEMS WILL BE REALIZED.	200.0	51.8		SEP 83	APR 85
T 80 5082	FLEXIBLE MACHINING SYSTEM, PILOT LINE FOR TCV COMPONENTS THIS PROJECT IS COMPLETE. A FINAL TECH REPORT IS BEING PREPARED.	907.4	863.4	44.0	JAN 81	JUN 83
T 81 5082	FLEXIBLE MACHINING SYSTEM, PILOT LINE FOR TCV COMPONENTS THIS PROJECT IS COMPLETE. A FINAL TECH REPORT IS BEING PREPARED.	779.0	712.9	20.0	MAR 82	JUN 83
T 82 5082	FLEXIBLE MACHINING SYSTEM, PILOT LINE FOR TCV COMPONENTS FMS FEASIBILITY STUDIES ARE CURRENTLY BEING CONDUCTED AT FOUR DIFFERENT INSTALLATIONS.	750.0	607.9	43.0	MAR 83	JUN 83
T 79 5083	UPSCALING OF ADVANCED POWDERED METALLURGY PROCESSES-PH 3 SEVEN NO. 6 AGT 1500 ENGINE ACCESSORY GEARS HAVE BEEN FORGED AT TRW. COMPLETED OIE FILL WAS OBTAINED AND THE QUALITY OF THE GEARS APPEAR EXCELLENT.	358.0	204.0	136.0	MAR 81	AUG 83
T 82 5083	UPSCALING OF ADVANCED POWDERED METALLURGY PROCESSES-PH 4 FYB2 FUNDS ARE FOR PROJECT MONITORING BY TACOM OF THE ON-GOING EFFORT AT TRW. \$136K OF \$154K OF IN-HOUSE LABOR EXPENDED OF THE ON-GOING FY79 PROJECT.	30.0				AUG 83
T 78 5085	PRODUCTION TECHNIQUES FOR FABRICATION OF TURBINE RECUPERATOR THE TWO LASER SYSTEM WAS ASSEMBLED AT THE SUB-CONTRACTOR. AFTER A SUCCESSFUL SYSTEM AND PROCESS OEMD ACCEPTANCE TESTING WAS PERFORMED. SYSTEM NOW ON LINE AT AVCO LYCOMING. AWAITING FINAL 301 AND TECH REPORT.	1,047.5	1,005.0	41.9	JAN 80	MAR 83
T 80 5085	TURBINE RECUPERATOR WORK IS COMPLETED ON THIS PHASE. AWAITING FINAL 301 AND TECH REPORT.	133.0	102.1	30.9	OCT 81	MAR 83

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PROJ NO.	TITLE + STATUS	AUTHO- RIZED (\$000)	CONTRACT VALUES (\$000)	EXPENDED LABOR AND MATERIAL (\$000)	ORIGINAL PROJECTED COMPLETE DATE	PRESENT PROJECTED COMPLETE DATE
T 81 5085	PRODUCTION TECHNIQUES FOR FABRICATING TURBINE RECUPERATOR WORK IS COMPLETED ON THIS PHASE. AWAITING FINAL 301 AND TECH REPORT.	250.0	215.2	28.0	SEP 82	MAR 83
T 81 5090	IMPROVED AND COST EFFECTIVE MACHINING TECHNOLOGY (PHASE III) DATA FOR A CROSS SECTION OF WORK PERFORMED BY THE CONTRACTOR HAS BEEN REVIEWED AND ANALYZED. ECONOMIC ANALYSES ARE BEING PERFORMED TO IDENTIFY COST-EFFECTIVE MACHINING CONDITIONS.	30.0		26.0	DEC 82	JUN 83
T 82 5090	IMPROVED AND COST EFFECTIVE MACHINING TECHNOLOGY (PHASE IV) DRILLING TESTS HAVE BEEN PERFORMED TO EVALUATE VARIOUS POINT GEOMETRIES. TESTS ARE BEING DEVELOPED TO EVALUATE SPECIAL SURFACE TREATMENTS ON HSS TOOLS. A CUTTER DESIGN IS BEING DEVELOPED FOR THE MACHINING OF COUNTER BORES IN L605 SPLIT RING SHROUD.	250.0	213.0		JAN 84	JAN 84
T 81 5091	HEAVY ALUMINUM PLATE FABRICATION (PHASE I) ALUMINUM ARMOR PLATE AND WELDING ELECTRODES RECEIVED. HOLDING FIXTURES AND WELD JOINTS DESIGNED.	30.0		30.0	MAR 84	MAR 83
T 78 5097	INTEGRALLY CAST LOW COST COMPRESSOR (PHASE II) FINAL LOTS OF CAST 1ST AND 2ND STAGES PROVIDED VERIFICATION OF PROCESSES. 5TH STAGE NEGATIVE FLASH VIDEOS HAVE NOT BEEN RESOLVED AND REQUIREMENTS ARE CONSIDERED BORDERLINE FOR STATE-OF-THE-ART CASTING TECHNIQUES. FINAL REPORT IS BEING PREPARED.	342.0	267.0	75.0	JUN 80	FEB 83
T 81 5097	INTEGRALLY CAST LOW COST COMPRESSOR (PHASE III) FINAL LOTS OF CAST 1ST AND 2ND STAGES PROVIDED VERIFICATION OF PROCESSES. 5TH STAGE NEGATIVE FLASH VIDEOS HAVE NOT BEEN RESOLVED AND REQUIREMENTS ARE CONSIDERED BORDERLINE FOR STATE-OF-THE-ART CASTING TECHNIQUES. FINAL REPORT IS BEING PREPARED.	50.0		48.0	DEC 81	FEB 83
T 81 6011	SPRINGS FROM FIBER/PLASTIC COMPOSITES ONE REAR SPRING ASSEMBLY HAS BEEN DELIVERED TO TACOM FOR LAB TESTING. COST GROWTH OF \$43K HAS BEEN FUNDED FROM T826011 AND OTHER 1982 MMT TAC VEHICLE FUNDS.	158.0	143.0	15.0	JAN 83	FEB 83
T 82 6011	SPRINGS FROM FIBER/PLASTIC COMPOSITES ONES HAVE BEEN DESIGNED AND ARE BEING FABRICATED.	158.0	58.0	57.0	JUN 83	SEP 83
T 82 6025	LASER MANUFACTURING PHASE I EFFORT TO PERFORM FEASIBILITY STUDY, CONTRACT LET.	100.0	32.0	3.3	MAR 85	MAR 85
T 81 6028	PRODUCTION QUALITY CONTROL BY AUTOMATED INSPECT EQUIPMENT A NEW CONTRACT PKG. FOR THE ON-LINE EVAL. OF THE AIDS HAS BEEN PREPARED. THE CONTRACT PKG. FACILITIES EVAL. OF AIDS FOR INSP. APPL. AT RAD. CONTROL SOFTWARE FOR THE 6V53 ENGINE IS BEING GENERATED. HARDWARE EVALUATION WILL BEGIN 1 APR 83.	60.0	47.8		JUL 82	SEP 83

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T 78 6035	ESTABLISH ON-LINE NDT FOR TRACKED COMBAT VEHICLES(PHASE 1) ***** DELINQUENT STATUS REPORT *****	1,832.0	1,630.0	202.0	APR 81	JUN 83
T 79 6038	HIGH DEPOSITION WELDING RETURNED DUE TO INSUFFICIENT INFORMATION.	1,478.0			JUL 80	AUG 84
T 82 6038	HIGH DEPOSITION WELDING RETURNED DUE TO INSUFFICIENT INFORMATION.	112.0				
T 82 6053	WELDING SYSTEMS INTEGRATION PROCUREMENT EFFORT RESULTED IN NO CONTRACT BEING AWARDED IN FY82. DUE TO CONTRACTING PROBLEMS PROJECT WILL BE TERMINATED.	25.0		12.0	SEP 82	JUN 83
T 82 6054	ADVANCED METROLOGY SYSTEMS INTEGRATION CONTRACT WAS AWARDED TO BOUZ ALLEN AND HAMILTON INC. THIS CONTRACT EFFORT INCLUDES A SURVEY, NEEDS ANALYSIS AND COMPUTER MODELING.	848.0	828.0	10.0	FEB 85	DEC 84
T 80 6057	XM1 COMBAT VEHICLE THE PROJECT WAS OFFICIALLY TERMINATED 19 NOV 1981. A FINAL REPORT IS PENDING.	69.0	39.0	30.0	OCT 82	DEC 83
T 80 6057 06	METROLOGY METHODS THE SUBTASK WAS OFFICIALLY TERMINATED ON 19 NOV 1981. A FINAL REPORT IS PENDING.	69.0	39.0	30.0		DEC 83
T 81 6057	XM1 COMBAT VEHICLE HMT CONTRACT BEING NEGOTIATED WITH CONTRACTOR.	67.0		57.0	MAY 82	JAN 84
T 81 6057 03	AUTOMATED METALLIZING GENERAL DYNAMICS L&O SYSTEMS DIVISION SUBMITTED A REVISED QUOTATION ON 21 JULY 1982. GOVERNMENT AUDIT WAS COMPLETED IN NOV 1982 AND THE TACOM PRICING REVIEW WAS COMPLETED IN DEC 1982.	67.0		57.0		NOV 83
T 81 6057 05	MACHINE DIAGNOSTICS GENERAL DYNAMICS SUBMITTED REVISED QUOTE FOR PROPOSAL ORIGINALLY SUBMITTED BY CHRYSLER. GOVERNMENT AUDIT COMPLETED 11/82 AND TACOM PRICING REVIEW COMPLETED 12/82.	22.3		19.0		JAN 84
T 81 6057 13	LASER CUTTING GENERAL DYNAMICS SUBMITTED REVISED QUOTE FOR PROPOSAL ORIGINALLY SUBMITTED BY CHRYSLER. GOVERNMENT AUDIT COMPLETED 11/82 AND TACOM PRICING REVIEW COMPLETED 12/82.	22.3		19.0		SEP 83
T 82 6057	XM1 COMBAT VEHICLE SEE SUBTASKS 03, 04, 05, 13.	1,102.0	145.0	89.0	SEP 83	SEP 83

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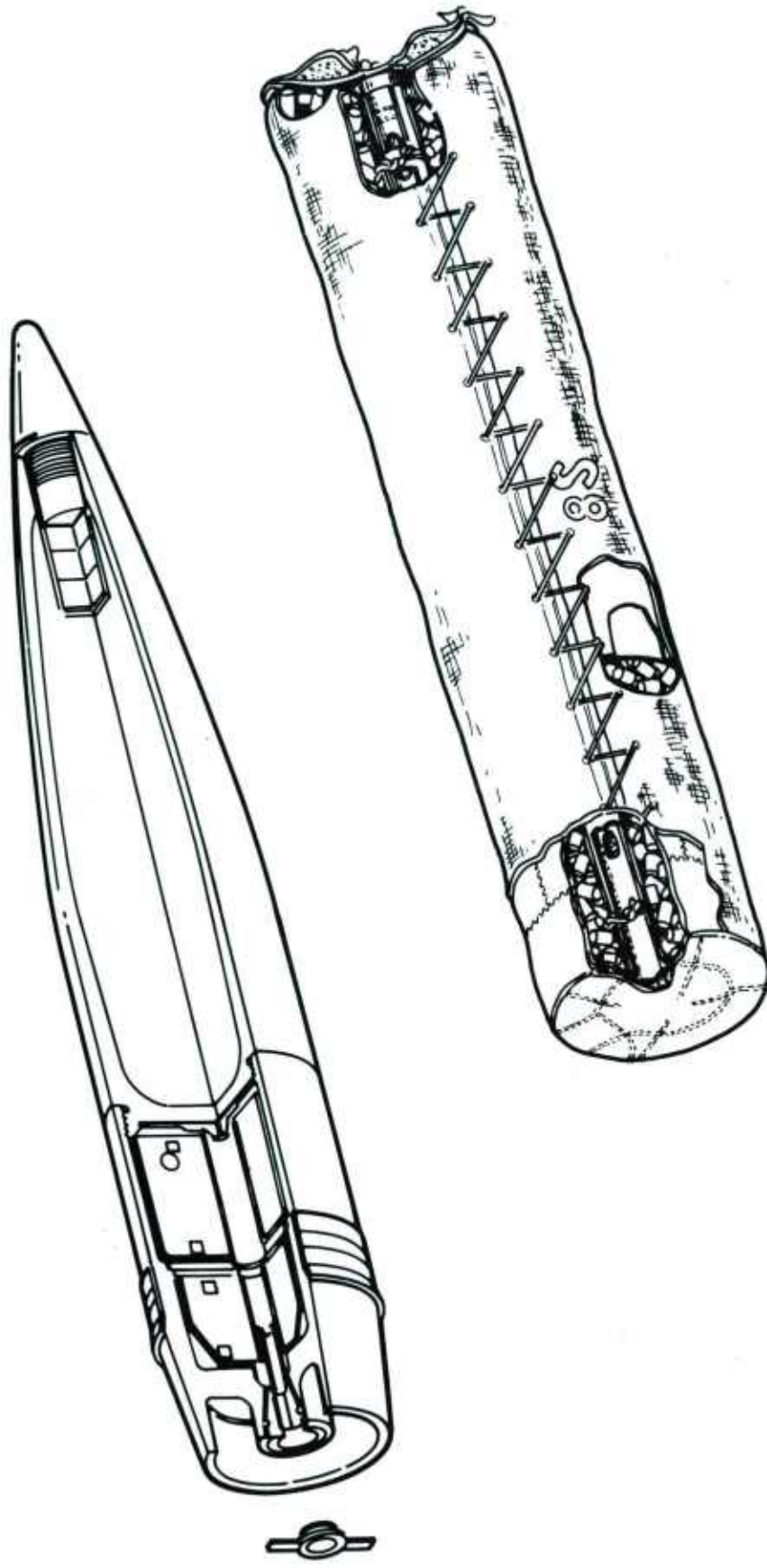
PROJ NO.	TITLE + STATUS	AUTHORIZED (\$000)	CONTRACT VALUES (\$000)	EXPENSED LABOR AND MATERIAL (\$000)	ORIGINAL PROJECTED COMPLETE DATE	PRESENT PROJECTED COMPLETE DATE
T 82 6057 03	AUTOMATED METALLIZING GENERAL DYNAMICS SUBMITTED A REVISED QUOTATION ON 21 JUNE 1982. THE GOVERNMENT AUDIT WAS COMPLETED IN NOV 1982 AND THE TACOM PRICING REVIEW WAS COMPLETED IN DEC 1982.	1,102.0	145.0	89.0	JUN 83	NOV 83
T 82 6057 04	THERMAL CUTTING OF TRACKED COMBAT VEHICLE PARTS CONTRACT AWARDED TO GENERAL DYNAMICS ON 1 JUL 82. PARAMETERS HAVE BEEN ESTABLISHED FOR SINGLE TORCH STRAIGHT AND BEVEL CUTS. A TRIPLE TORCH SET UP IS CURRENTLY BEING INVESTIGATED.	328.0	145.0	25.0		MAY 83
T 82 6057 05	MACHINE DIAGNOSTICS GENERAL DYNAMICS SUBMITTED REVISED QUOTE FOR PROPOSAL ORIGINALLY SUBMITTED BY CHRYSLER. GOVERNMENT AUDIT COMPLETED 11/82 AND TACOM PRICING REVIEW COMPLETED 12/82.	258.0		21.0	SEP 83	JAN 84
T 82 6057 13	LASER CUTTING GENERAL DYNAMICS SUBMITTED REVISED QUOTE FOR PROPOSAL ORIGINALLY SUBMITTED BY CHRYSLER. GOVERNMENT AUDIT COMPLETED 11/82 AND TACOM PRICING REVIEW COMPLETED 12/82.	258.0		22.0	MAY 83	SEP 83
T 80 6059	LARGE CAST ALUMINUM COMPONENTS THE STATUS REPORT ON THIS SYSTEM PROJECT WAS NOT RECEIVED. THE SUM OF THE SUBTASK STATUS REPORTS WHICH WERE RECEIVED IS 900K LESS THAN THE AUTHORIZED FUNDING.	1,638.0			JUL 81	JUN 83
T 80 6059 01	M2 AND M3 CAST ALUMINUM COMPONENTS PHASE 1 OF THIS PROJECT COMPLETED. AWAITING FINAL TECH REPORT.	538.0	424.0	14.0		OEC 83
T B1 6059	M2 AND M3 FIGHTING VEHICLE SYSTEM THE STATUS REPORT ON THIS SYSTEM PROJECT WAS NOT RECEIVED. THE SUM OF THE SUBTASK STATUS REPORTS WHICH WERE RECEIVED IS 1K MORE THAN THE AUTHORIZED FUNDING.	290.0			NOV 84	JAN 83
T 81 6059 04	RESIN MOLOED COMPOSITE MATERIALS FABRICATION OF THE TRIM VANE IS CONTINUING. QUALITY ASSURANCE REQUIREMENTS ARE BEING FORMULATED AND A TEST PLAN HAS BEEN SUBMITTED BY THE CONTRACTOR FOR REVIEW.	291.0	285.0	2.0		JUN 83
T 82 6059	M2 AND M3 FIGHTING VEHICLE SYSTEM THE STATUS REPORT ON THIS SYSTEM PROJECT WAS NOT RECEIVED. THE SUM OF THE SUBTASK STATUS REPORTS WHICH WERE RECEIVED IS 1143K MORE THAN THE AUTHORIZED FUNDING.	1,428.0			DEC 84	OEC 84
T 82 6059 01	M2 AND M3 CAST ALUMINUM COMPONENTS FOUNDRY WORK FOR SUPPLEMENTARY BALLISTIC TEST PLATES COMPLETED. COMPLETED ALL BALLISTIC TESTS + ESTABLISHED BALLISTIC BASELINE DATA FOR CAST ALUM ALLOY A206. PERFORMED TENSILE, IMPACT, STRESS, CORROSION TESTS + CHEMICAL ANALYSIS.	490.0	445.0	24.5	DEC 83	JAN 84

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T 82 6059 02	SELF-THREADING FASTENERS PRODUCTION TARGET AREAS OF EVALUATION AND THEIR REQUIREMENTS ARE BEING EVALUATED. FASTENER SELECTION FOR TESTING IS UNDERWAY.	488.0	190.0	12.0	FEB 83	JUL 84
T 82 6059 03	ADHESIVE BONDING PRODUCTION TARGET COMPONENT AREAS TO BE EVALUATED HAVE BEEN IDENTIFIED.	300.0	250.0	13.0		OCT 84
T 82 6059 06	LASER HEAT TREATING MATERIAL HAS BEEN PROCURED FOR ALL ELEMENTS OF THIS TASK. TOOLS, FIXTURES, AND HARDWARE ARE BEING FABRICATED.	387.0	337.0	13.0	SEP 84	MAR 85
T 82 6059 08	PRODUCTION METHODS FOR COMPOSITE TURRET BASKET CONTRACT WAS AWARDED TO FMC. PROGRAM SCHEDULE HAS BEEN SET. DESIGN OF THE BASKET HAS BEEN ESTABLISHED. MATERIAL PROCESSING WAS INITIATED.	488.0	438.0	12.0	JUN 83	JUN 83
T 82 6059 20	CARC APPLICATION PROCESSING TECH THE PAINT TEST PLAN HAS BEEN COMPLETED AND APPROVED. ROBOTIC PAINT EQUIPMENT IS BEING INSTALLED AND PAINT SAMPLES ARE BEING PROCURED.	418.0	368.0	13.0	DEC 84	AUG 84
T 82 6067	FRAME WELDING FIXTURES PROCUREMENT PACKAGE PREPARED FOR CONTRACTOR EFFORT. CONTRACT AWARDED FOR THE SYSTEM DESIGN.	77.0		1.0	FEB 84	MAR 84
T 81 6076	AUTOMATED DEPUT INSPECTION OF ROADWHEELS THE SYSTEM WAS DELIVERED TO RED RIVER ARMY DEPOT FOR ACCEPTANCE TESTING IN APRIL. DEPOT PERSONNEL WERE TRAINED TO OPERATE THE EQUIPMENT SO THAT NOT DATA COULD BEGIN. THE NOT DATA WILL BE STATISTICALLY COMPARED TO ESTABLISH A CORRELATION.	247.0	225.0	20.0	SEP 83	SEP 84
T 82 6078	AUTO DYNAMOMETER CONTROL F/STANDARDIZATION INSP TESTING MEMO OF AGREEMENT BETWEEN RRAO + TACOM HAS BEEN SIGNED AND SPECIFIED RESPONSIBILITIES FOR PROGRAM EXECUTION. THE CONTRACT PKG. HAS BEEN PREPARED + THE RFP IS SCHEDULED TO BE RELEASED IN FEB 83. THE CONTRACT IS SCHEDULED TO BE AWARDED DURING FYB3.	65.0			SEP 85	SEP 85
T 82 6079	AGT-1500 ENGINE THE STATUS REPORT ON THIS SYSTEM PROJECT WAS NOT RECEIVED. THE SUM OF THE SUBTASK STATUS REPORTS WHICH WERE RECEIVED IS 160K LESS THAN THE AUTHORIZED FUNDING.	1,360.0			MAR 85	MAR 85
T 82 6079 01	MONOCRYSTAL ALLOY FOR HIGH PRESSURE TURBINE BLADES CASTING TOOLING INCLUDING CORE FOR THE FIRST STAGE TURBINE BLADES HAVE BEEN SHIPPED TO TRW FOR CASTING PROCESS DEFINITION. CASTING PROCESS DEFINITION IS CURRENTLY IN PROGRESS.	350.0	300.0	21.0	SEP 83	APR 85

MANUFACTURING METHODS AND TECHNOLOGY PROGRAM
SUMMARY PROJECT STATUS REPORT
2ND SEMIANNUAL SUBMISSION CY 82 RCS DRCMT-3D1

PROJ NO.	TITLE + STATUS	AUTHORIZED (\$000)	CONTRACT VALUES (\$000)	EXPENDED LABOR AND MATERIAL (\$000)	ORIGINAL PROJECTED COMPLETE DATE	PRESENT PROJECTED COMPLETE DATE
T 82 6079 02	RAPIDLY SOLIDIFIED TECHNOLOGY -RST- NICKLE-BASE SUPERALLOY CAP PROCESS DEFINITION COMPLETED, AND CAP VARIABILITY STUDY IS BEING EVALUATED. CAP DISKS HAVE BEEN MANUFACTURED USING DIFFERENT CROSS-ROLLING AND HEAT TREATMENT PROCESS.	400.0	350.0	20.0	SEP 83	MAY 84
T 82 6079 03	81-CAST HIGH PRESSURE TURBINE NOZZLE WORK ON PERFORMANCE, AERODYNAMIC, THERMAL, AND STRUCTURAL ANALYSIS CURRENTLY IN PROGRESS AND IS EXPECTED TO BE COMPLETED 8Y 2Q FY83.	450.0	416.0	16.0	OCT 83	MAR 85
T 81 6089	A8RAMS TANK PLANT - TECH MOD PROGRAM PRELIMINARY SCOPE OF WORK COMPLETED AND REVIEWED 8Y M1 PMD.	100.0		51.0	SEP 83	JAN 83
T 82 6090	TODDLE ARMY DEPOT PRODUCTIVITY IMPROVEMENT PROGRAM A MAJORITY OF THE PREPARATORY WORK OF THE INDUSTRIAL PRODUCTIVITY IMPROVEMENT PROGRAM HAS BEEN COMPLETED. TEAD PERSONNEL ATTENDED IDEF SEMINARS AT TEXAS A+M UNIVERSITY.	100.0		7.2	MAY 83	MAY 83
T 81 6098	PRODUCTION OF SPECIAL ARMOR STEEL THE CONTRACTOR HAS BEEN SUCCESSFUL IN ROLLING 2 INCH THICK MATERIALS WITH THE DESIRED TEXTURING. THE STEEL PRODUCED MEETS THE ESTABLISHED REQUIREMENTS OF TEXTURE AND HARDNESS.	900.0	328.0	150.0	NOV 83	NOV 83
T 81 6099	MANUFACTURING METHODS FOR SPECIALIZED ARMOR MATERIALS AMMRC, ARADCOM AND PM8 HAVE INITIATED ACTIVITY IN AREAS OF MATERIALS, PROCESSES AND FACILITIES TOWARD REALIZING THE PROGRAM OBJECTIVE.	3,550.0	3.3	200.0	JUL 84	MAR 84
T 82 6107	IMPROVED MBT TRACK FUNDING WAS DRASTICALLY REDUCED. PROCUREMENT REQUESTS HAVE BEEN PREPARED, AND ARE READY FOR AWARD AFTER FY 83 FUNDS ARE RECEIVED.	193.0		100.0	SEP 83	JUN 83



**ARMAMENT RESEARCH AND DEVELOPMENT COMMAND
ARMAMENT MATERIEL READINESS COMMAND
(ARRADCOM, ARRCOM)
(AMMUNITION)**

A R R C O M - A R R A O C O M (AMMUNITION)

CURRENT FUNDING STATUS, 2ND CY82

FISCAL YEAR	NU. OF PROJECTS	AUTHORIZED FUNOS (\$)	* * C O N T R A C T A L L O C A T E D (\$)	* * F U N D I N G E X P E N D E D (\$)	* * I N H O U S E R E M A I N I N G (\$)	* * F U N D I N G E X P E N D E D (\$)
75	1	3,760,000	2,256,000	2,169,000 (96%)	1,504,000	1,504,000 (100%)
76	1	1,196,000	819,000	719,000 (87%)	377,000	377,000 (100%)
77	1	1,079,000	963,000	935,000 (97%)	116,000	116,000 (100%)
77	2	2,025,900	1,230,100	1,194,000 (97%)	795,800	795,800 (100%)
78	6	3,627,400	2,136,700	2,136,700 (100%)	1,490,700	1,440,000 (96%)
79	17	11,453,800	6,810,000	5,546,800 (81%)	4,643,800	3,768,300 (81%)
80	25	16,660,500	10,746,500	9,296,500 (86%)	5,914,000	4,264,000 (72%)
81	33	22,286,000	13,622,900	8,735,800 (64%)	8,663,100	4,426,700 (51%)
82	47	35,706,000	24,707,800	12,205,800 (49%)	10,998,200	4,150,400 (37%)
TOTAL	133	97,794,600	63,292,000	42,938,600 (67%)	34,502,600	20,842,200 (60%)
AUTHORIZED FUNDING		CONTRACT ALLOCATED 65%		INHOUSE REMAINING 35%		

MANUFACTURING METHODS AND TECHNOLOGY PROGRAM
S U M M A R Y P R O J E C T S T A T U S R E P O R T
2ND SEMIANNUAL SUBMISSION CY 82 RCS DRCMT-301

PROJ NO.	TITLE + STATUS	AUTHORIZED (\$000)	CONTRACT VALUES (\$000)	EXPENDED LABOR AND MATERIAL (\$000)	ORIGINAL PROJECTED COMPLETE DATE	PRESENT PROJECTED COMPLETE DATE
5 80 0900	AUTOMATED MULTIPLE FILTER LIFE TESTER TWO TECHNIQUES FOR DISPERSING THE AGENT WERE DEVELOPED. ONE UTILIZED A PIEZOELECTRIC CRYSTAL TO VAPORIZE THE AGENT. THE OTHER USED A THERMAL RESISTOR TO DISPERSE THE AGENT. A BELLOFRAM DIAPHRAGM PUMP WAS DEVELOPED AS A SIMULATED BREATHING DEVICE.	350.0	115.0	78.0	NOV 81	SEP 83
5 82 0904	CHEMICAL REMOTE SENSING SYSTEMS THE TECH DATA PACKAGE WAS ANALYZED. CONTRACTORS FACILITIES WERE VISITED TO ESTABLISH INTERFEROMETER PRODUCTION PROCESSES. COST ESTIMATES WERE DETERMINED FOR TOOLING AND EQUIPMENT FOR THE INTERFEROMETER PILLT FACILITY.	300.0	180.0	73.0	DEC 82	JAN 84
5 82 0905	MANUFACTURE OF IMPREGNATED CHARCOAL-WHETLERITE THE SCOPE OF WORK FOR CONTRACT EFFORT WAS COMPLETED. THE PROCUREMENT REQUEST PACKAGE WAS COMPLETED.	256.0		40.0	DEC 84	NOV 85
5 82 0909	AUTOMATED AGENT PERMEATION TESTER CONTRACTOR HAS COMPLETED EVALUATION, DESIGN AND ENGINEERING ANALYSIS. ALTERNATE FLAME PHOTOMETRIC DETECTORS WILL BE USED FOR EACH TEST CHAMBER. THE CONCEPT IS CALLED DETECTOR SIGNAL MULTIPLEXING.	224.0	150.0	9.5	JUN 83	DEC 83
5 82 0913	SPIN COATING OF DECON AGENT CONTAINERS CONTRACT AWARDED ON 17 SEP 82 TO BATTELLE. TECHNOLOGY AND ENGINEERING EVALUATIONS ARE BEING CONDUCTED. APPLICATION TECHNIQUES ARE BEING EVALUATED.	255.0	200.0	17.9	FEB 83	SEP 84
5 80 1001	PILOT LINE FOR FUZE FLUIDIC POWER SUPPLIES ***** DELINQUENT STATUS REPORT *****	719.0	584.0	48.0	OCT 81	OCT 83
5 81 1001	PILOT LINE FOR FUZE FLUIDIC POWER SUPPLIES ***** DELINQUENT STATUS REPORT *****	315.0				
5 80 1003	LOW COST MOLDED PACKAGING FOR HY8KID ELECTRONICS ***** DELINQUENT STATUS REPORT *****	243.0	191.4	50.0	MAY 81	JUN 83
5 80 1005	CERAMIC-METAL SUBSTRATES FOR HY8RID ELECTRONICS ***** DELINQUENT STATUS REPORT *****	319.0	217.0	111.0	OCT 81	JUN 83
5 82 1019	MMT PENTA8ORANE PROCESS ENGINEERING ***** DELINQUENT STATUS REPORT *****	340.0				
5 79 1295	MODERNIZATION OF CHARCOAL FILTER TEST EQUIPMENT THE DESIGN OF THE CONTAINMENT CHAMBER HAS BEEN FINALIZED AND THE LEVEL 1 DRAWINGS ARE 75 PERCENT COMPLETE. A MODULAR PANEL TYPE ASSEMBLY HAS BEEN PROPOSED TO FACILITATE SHIPMENT AND RECONSTRUCTION.	360.0	248.0	105.0	DEC 80	MAR 83

MANUFACTURING METHODS AND TECHNOLOGY PROGRAM
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2ND SEMIANNUAL SUBMISSION CY 82 RCS DRCMT-301

PROJ NO.	TITLE + STATUS	AUTHOR- RIZED	CONTRACT VALUES (\$000)	EXPENDED LABOR AND MATERIAL (\$000)	ORIGINAL PROJECTED COMPLETE DATE	PRESENT PROJECTED COMPLETE DATE
5 79 1318	CHEMICAL PRODUCTION FILL, CLOSE AND LAP FOR 8 IN XM736 PROJ. THIS PROJECT IS COMPLETED.	398.0		398.0	MAR 81	MAR 83
5 80 1318	PRODUCTION, FILL, CLOSE AND LAP 8 IN XM736 AND BLU 80 BOMB FILL AND CLOSE DRAWINGS COVERING THE TRACK FOR WEIGH STATION AND MILLING MACHINE WERE COMPLETED.	484.0	31.0	411.0	JUN 81	APR 83
5 81 1318	PRODUCTION, FILL, CLOSE AND LAP 8 IN XM736 AND BLU 80 BOMB OPTICAL AND ALUMINUM OXIDE MOISTURE ANALYZERS WERE EVALUATED. INERTIA WELD REMARK PROCEDURE WAS COMPLETED.	216.0		203.0	JUL 82	APR 83
8 78 1335	MANUFACTURING TECHNIQUES FOR NEW PROTECTIVE MASK PROJECT IS COMPLETED.	764.0	400.0	364.0	JUN 79	JUN 83
5 79 1335	MANUFACTURING TECHNIQUES FOR NEW PROTECTIVE MASK PROJECT IS COMPLETED.	1,173.0	500.0	673.0	OCT 82	JUN 83
5 80 1335	MANUFACTURING TECHNIQUES FOR NEW PROTECTIVE MASK PROJECT IS COMPLETED.	1,574.0	1,162.0	412.0	DEC 82	JUN 83
5 81 1335	MANUFACTURING TECHNIQUES FOR NEW PROTECTIVE MASK PILOT PRODUCTION LINE INSTALLED AND PRODUCTION OF INDIVIDUAL COMPONENTS UNDERWAY. PROTOTYPES OF ALTERNATE FACEBLANK MATERIAL BEING FABRICATED. TDP IS COMPLETE.	2,576.0	2,369.0	197.0	OCT 82	JUN 83
5 82 1335	MANUFACTURING TECHNIQUES FOR NEW PROTECTIVE MASK PHYSICAL CONFIGURATION AUDIT IS COMPLETE.	1,000.0	1,000.0		DEC 82	JAN 83
5 80 1348	SUPER TROPICAL BLEACH ALL TASKS HAVE BEEN COMPLETED.	202.0	170.7	31.3	MAR 81	MAR 83
5 81 1348	SUPER TROPICAL BLEACH WORK WAS COMPLETED ON THE ENGINEERING DESIGN OF A LIQUID REACTOR DOUBLE SALT PROCESS PILOT PLANT.	822.0	551.8	134.4	APR 84	OCT 83
5 78 1353	SMOKE MIX PROCESS (GLATT) FINAL TECHNICAL REPORT IS BEING PREPARED.	416.0	18.0	398.0	OCT 80	MAR 83
5 79 1354	SLOUGE VOLUME REDUCTION AND DISPOSAL PROCESS STUDY PROJECT ACTIVITY COMPLETED. FUNDS EXPENDED. AN INTERIM TECHNICAL REPORT TO BE PREPARED WILL CLOSE OUT THIS PROJECT.	122.0		122.0	SEP 80	APR 83
5 80 1354	SLOUGE VOLUME REDUCTION AND DISPOSAL PROCESS STUDY EQUIPMENT PURCHASE REQUESTS SUBMITTED TO PROCUREMENT OFFICE. RF85 ISSUED AND BID RESPONSES BEING EVALUATED. LAYOUT AND PLAN FOR SLOUGE DEMATERING PRESS AND ASSOCIATED EQUIPMENT IS IN PREPARATION TO PROVIDE CONTRACT DESIGN PKG FOR EQUIPMENT INSTLN.	156.0	39.9	116.1	DEC 80	MAR 83

S U M M A R Y P R O J E C T S T A T U S R E P O R T
MANUFACTURING METHODS AND TECHNOLOGY PROGRAM
2ND SEMIANNUAL SUBMISSION CY 82 RCS DRCMT-3D1

PROJ NO.	TITLE + STATUS	AUTHO- RIZED (\$000)	CONTRACT VALUES (\$000)	EXPENDED LABOR AND MATERIAL (\$000)	ORIGINAL PROJECTED COMPLETE DATE	PRESENT PROJECTED COMPLETE DATE
5 81 1354	SLUDGE VOLUME REDUCTION AND DISPOSAL PROCESS DETERMINATION MADE TO DISPOSE OF DEWATERED SLUDGE IN A STATE APPROVED CHEMICAL LANDFILL. FUNDS WERE BUDGETED FOR EQUIPMENT PURCHASE AND INSTALLATION.	110.0	55.9	4.2	SEP 83	SEP 83
5 79 1355	MANUFACTURING PLANT TOXIC EFFLUENT/EMISSION PRETREATMENT PROJECT COMPLETED. TECHNICAL REPORT WILL BE COMPLETED IN APRIL 1983.	104.0	52.2	51.8	JAN 81	APR 83
5 80 1355	MANUFACTURING PLANT TOXIC EFFLUENT/EMISSION PRETREATMENT TREATMENT OF TOXIC HAZARDOUS MATERIAL HAVE BEEN EVALUATED. DESIGN CRITERIA WAS COMPLETED AND WAS INPUT TO THE MCA PROJECT. PROJECT IS COMPLETED.	222.0		204.1	DEC 81	APR 83
5 81 1500	EVAL INDUST CAPABILITY F/LOAD COMMERCIAL EXPL-HIGH USE MUNIT A COST GROWTH OF \$70K TO SUPPORT THE IRECD CONTRACT WAS APPROVED. NOTICE TO PROCEED WITH PHASE II GIVEN TO CONTRACTOR.	543.0	238.0	216.0	SEP 82	JUN 83
5 82 1500	EVAL INDUST CAPABILITY F/LOAD COMMERCIAL EXPL-HIGH USE MUNIT FINAL DATE FOR LOADING AND TESTING OF 80MBS ESTABLISHED. MILESTONES RESCHEDULED.	450.0		321.0	OCT 83	SEP 83
5 82 1600	THREE PIECE SHAFT FOR THE SUU-65/B TAILCONE ***** DELINQUENT STATUS REPORT *****	250.0				
5 82 1701	BULK TRANSFER OF CHEMICAL MATERIALS CONTINUED ANALYSIS OF CURRENT AND PROPOSED MATERIAL HANDLING PROCEDURES AND MATERIAL CHARACTERIZATION. INITIATED EQUIPMENT SURVEY AND MATERIAL HANDLING TESTS AT VENDORS.	221.0		57.7	SEP 85	SEP 85
5 82 1709	IMPROVED PROCESSING OF PYROTECHNIC MIXTURES COMPLETED DESIGN CONCEPT AND ORDERED RAW MATERIALS AND AUXILIARY EQUIPMENT.	500.0		180.5	JUL 84	JUL 84
5 82 1711	RED PHOSPHORUS POLLUTION ABATEMENT EVALUATIONS PROCESS AND CRITERIA SURVEYS CONDUCTED. SMALL SCALE TESTS INDICATE WASTE FROM RP OPERATIONS VERY TOXIC TO AQUATIC LIFE. EVALUATIONS INITIATED FOR SELECTION OF A WASTE COLLECTION SYSTEM.	125.0		17.3	OCT 83	OCT 83
5 81 1907	AUTOMATED GAGING FOR MEDIUM CAL. PROJECTILE BODIES (CAM) THE WORK EFFORT DURING THE PERIOD 1 JULY THRU 31 DEC HAS CENTERED ON THE COMP. OF THE PROTOTYPE GAGING SYS.. TO CHARACTERIZE THE FEATURES OF THE FORWARD FUSE MATING THREADS.	542.9	10.7	204.4	SEP 83	SEP 84
5 79 3961	IMPROVED 3-D VIBRATION ACCEPTANCE TEST FOR ART FUZES ***** DELINQUENT STATUS REPORT *****	282.0	192.0	69.0	SEP 81	JUN 83

MANUFACTURING METHODS AND TECHNOLOGY PROGRAM
S U M M A R Y P R O J E C T S T A T U S R E P O R T
2ND SEMI-ANNUAL SUBMISSION CY 82 RCS DRCMT-301

PROJ NO.	TITLE + STATUS	AUTHO- RIZED	CONTRACT VALUES	EXPENDED LABOR AND MATERIAL (\$000)	ORIGINAL PROJECTED COMPLETE DATE	PRESENT PROJECTED COMPLETE DATE
5 80 3961	IMPR (3-D) VIB ACCEPT TSTNG F ART FUZES AND S/A MECHANISMS ***** DELINQUENT STATUS REPORT *****	502.0	432.0	70.0	SEP 82	DEC 83
5 81 3961	IMPRVD VIBR ACCEPTANCE TESTING F/M732,XM587/724 FUZES ? S?A ***** DELINQUENT STATUS REPORT *****	650.0			DEC 83	DEC 83
5 79 4000	AUTOMATED M55 DETONATOR PRODUCTION EQUIPMENT HAZARDS ANALYSIS REPORT PUBLISHED. CONTRACTOR MODIFYING INSPECTION MODULE. TWO ROTATING DOVE PRISMS, NEW FIBER OPTICS AND A NEW DIAL WERE INSTALLED. SOFTWARE UPDATED.	1,762.5	1,368.4	882.2	MAR 81	SEP 83
5 81 4000	AUTOMATED M55 DETONATOR PRODUCTION EQUIPMENT CONTINUED CONTRACT MONITORING.	403.5	67.5	280.8	SEP 81	MAR 84
5 79 4024	DSN DEV BLD PROT COMP AND AUTO ASSY MACH M223 FUZE ADDITIONAL FUNDING RECEIVED OCT 82. INITIATED DISCUSSION WITH PRIME CONTRACTOR FOR PROJECT COMPLETION.	1,935.0	1,445.1	210.9	SEP 81	DEC 84
5 80 4037	PROCESS IMPROVEMENT FOR PLASTIC-BUNDED EXPLOSIVES THE NAUTA MIXER/DRYER WAS FABRICATED AND SHIPPED IN DEC 82. EXPECTED TO ARRIVE AT HOLSTON AAP IN JAN 83.	255.8	204.8	49.0	DEC 81	MAR 83
5 79 4046	QUANTITATIVE ANALYSIS OF BLENDED EXPLOSIVE SAMPLES PLAN DEVELOPED TO INVESTIGATE SEVERAL PARAMETERS USING POLAROGRAPHY AT ARRADCOM AND LONE STAR AAP. CONSIDERATION GIVEN TO MERCURY DROP SIZE, SAMPLE TEMPERATURE, PIPET ACCURACY AND DEOXYGENATION. REMAINING EFFORT WILL NOW TAKE PLACE AT LONE STAR AAP.	307.0	35.0	262.9	NOV 80	JUN 83
5 81 4059	CONTROL OF NQ CRYSTALLIZATION AN INVESTIGATION OF THE AGGLOMERATION OF NQ WAS CONTINUED, INCLUDING THE EFFECTS OF HYDROPHOBIC COATINGS AND HUMIDITY ON CHANGES IN SPECIFIC SURFACE WITH TIME.	190.0	1.3	177.5	SEP 82	MAR 83
5 82 4061	NITROGUANIDINE PROCESS OPTIMIZATION DUE TO THE HIGH CONVERSION AND GOOD OPERATION ACHIEVED IN THE NQ PLANT SECTION, ADDITIONAL EFFORTS CONCENTRATED ON THE GN SECTION. CONVERSION OF CALCIUM CYANAMIDE TO GN WAS INCREASED TO ABOVE 90 PERCENT AT A HIGHER AN TO CALCIUM CYANAMIDE RATIO.	1,150.0	1,059.0	82.0	MAR 83	SEP 83
5 81 4062	AUTO MANUFACTURE SYSTEM FOR MORTAR INCREMENT CONTAINERS A HUT FORMING PAPER MOLDING PROCESS HAS BEEN ESTABLISHED FOR THE 60MM M204 AND 81MM M205 INCREMENT CONTAINER ASSEMBLIES. ALL FY 81 TASKS HAVE BEEN COMPLETED AND A FINAL 301 REPORT IS BEING PREPARED.	2,440.7	2,340.7	92.5	JUL 83	MAY 83

MANUFACTURING METHODS AND TECHNOLOGY PROGRAM
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PROJ NO.	TITLE + STATUS	AUTHORIZED (\$000)	CONTRACT VALUES (\$000)	EXPENDED LABOR AND MATERIAL (\$000)	ORIGINAL PROJECTED COMPLETE DATE	PRESENT PROJECTED COMPLETE DATE
5 81 4062 01	SLURRY VACUUM FORMING MFG SYS THE CONTAINER HALF MANUFACTURING MACHINE, MODULE 1 + THE TRIM + HOLE PUNCH MACHINE, MODULE 11 HAVE BEEN DEBUGGED + MECHANICALLY TESTED. A DEMONSTRATION IS EXPECTED TO BE DONE DURING APR OF 1983.		1,400.8			APR 83
5 81 4062 03	ASSEMBLY SYSTEM PRELIMINARY ACCEPTANCE TESTING OF THE ASSEMBLY WAS INITIATED ON 28 NOV 82 AT THE CONTRACTORS FACILITY. PROBLEMS CAUSED TESTING TO BE HALTED. TESTING WAS CONTINUED TO RESOLVE PROBLEMS.		695.2			SEP 82
5 81 4062 04	SLURRY VACUUM FORMING OPTIMIZATION THE MFG SYSTEM HAS BEEN DEBUGGED + MECHANICALLY TESTED. INSTALLATION WAS INITIATED DURING THE MONTH OF DEC 1982.		1,400.8			MAY 82
5 81 4062 05	PAPER MOLDING OPTIMIZATION THE CONTRACT EFFORT WAS COMPLETED UPON RECEIPT OF 653 EA. 60MM M204 + 81MM M205 PAPER MOLOED CONTAINER ASSEMBLY IN SEPT.-OCT 1982 AND A FINAL TECHNICAL REPORT. IN DEC 1982. ALSO, A FINAL TECH RPT. WILL BE ISSUED DURING FY83.		177.6			SEP 82
5 82 4062	AUTO MANUFACTURE SYSTEM FOR MORTAR INCREMENT CONTAINERS PRELIM. TESTING HAS BEEN INITIATED WITH THE ASSY SYS. THE SLURRY VACUUM FORMING HAS BEEN INSTALLED. THE PAPER MOLOING MFG. SYS PROOF-OF-PRINCIPLE TESTING WAS SUCCESSFULLY COMPL. + SYS FAB HAS BEEN STARTED. THE PROTOTYPE TOOLING CONTRACT WAS ISSUED.	3,162.0	2,834.2	222.0	SEP 84	SEP 84
5 82 4062 01	SLURRY VACUUM FORMING MFG SYS THE CONTAINER HALF MFG. MACHINE, MODULE 1 + THE TRIM AND HOLE PUNCH MACHINE, MODULE 11 HAVE BEEN DEBUGGED + MECHANICALLY TESTED AT THE CONTRACTORS FACILITY AND SHIPPED TO AMTEC IN OCT-OEC 1982 TIMEFRAME.		775.4		SEP 83	SEP 83
5 82 4062 02	PAPER MOLDING MANUFACTURING SYSTEM PAPER MOLOING PROOF-OF-PRINCIPLE TESTING HAS BEEN COMPLETED + FABRICATION OF THE MAJOR SYS. COMPONENTS HAS BEGAN. THE TRANSFERENCE OF THE TECHNICAL DATA CONCERNING PAPER MOLOING WAS SUCCESSFULLY ACCOMPLISHED.		1,404.0		JUL 84	FEB 84
5 82 4062 03	ASSEMBLY SYSTEM PRELIMINARY ACCEPTANCE TESTING OF THE ASSEMBLY WAS PERFORMED ON 28 NOV 1982. HOWEVER, PROBLEMS WERE ENCOUNTERED WHICH HALTED TESTING. TESTING CONTINUED 15-16 DEC 82 + 3-7 JAN 83 TO RESOLVE PROBLEMS. FINAL TESTING TO BE CONDUCTED IN FEB 83.		420.1		SEP 83	SEP 83

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PROJ NO.	TITLE + STATUS	AUTHORIZED (\$000)	CONTRACT VALUES (\$000)	EXPENDED LABOR AND MATERIAL (\$000)	ORIGINAL PROJECTED COMPLETE DATE	PRESENT PROJECTED COMPLETE DATE
5 82 4062 06	PROTOTYPE PRODUCTION TOOLING THE CONTRACT WAS AWARDED TO INNOVA, INC. ON 23 NOV 1982. ALSO THE PROTOTYPE TOOLING DESIGN WORK WILL BE INTERFACED TO THE RECENT TOOLING IMPROVEMENTS MADE AT EDS CORPORATION UNDER CONTRACT 8D-C-0325 TO INSURE PROPER INCORPORATION INTO EFFORT.	300.0	234.7	163.8	DEC 86	OCT 83
5 82 4078	UPGRADE SAFETY, READINESS, + PROD OF EXISTING MELT POUR LINES CONDUCTED SEVEN LOADING TESTS IN AN ATTEMPT TO DEFINE AN ACCEPTABLE COOLING PROCESS FOR TNT LOADED 155MM, M549 PROJECTILES. POROSITY AND CAVITATION CONTINUE TO BE A PROBLEM.					
5 78 4139	APPL OF RADAR TO BALLIST ACCEPTANCE TESTING OF AMMO-ARBAT THIS PROGRAM IS ALMOST COMPLETE. HARDWARE IS UNDERGOING FINAL ACCEPTANCE TESTING. THE FINAL TECHNICAL REPORT IS BEING PREPARED. IT HAS BEEN DEMONSTRATED THAT ARBAT CAN PROVIDE ACCURATE BALLISTIC TRAJECTORY DATA FROM (SEE MMT PROJECT 5 79 4139)	1,565.0	1,293.7	271.3	FEB 79	DEC 83
5 79 4139	APPL OF RADAR TO BALLIST ACCEPTANCE TESTING OF AMMO-ARBAT (SEE MMT PROJECT 5 78 4139) LAUNCH TO IMPACT/EVENTS INCLUDING BODY MOTION. THIS DATA IS RETRIEVABLE IN REAL TIME.	763.8	735.6	28.2	SEP 79	DEC 83
5 82 4145	CONTROL DRYING AUTO S8 + BALL PROPELLANT MANUFACTURING SEE INDIVIDUAL SUBTASKS.	479.4	260.3	82.5	SEP 83	SEP 83
5 82 4145 01	CONTROL DRYING AUTO SB PROP MFG MILESTONE SCHEDULE AND FUNDING UPDATED TO ACCOMMODATE CASBL LATEST PROVEDOUT SCHEDULE. GC ANALYZER INSTALLED WITH SAMPLING LINES TO SR/WD OPERATIONS. ESTABLISHMENT OF PROCESS CONTROLS HAS BEEN INITIATED AND WILL BE CONTINUED.	336.0	218.9	47.0	SEP 83	SEP 83
5 82 4145 02	CONTROL DRYING AUTO BALL PROP MFG PILOT PLANT K AWARDED. PURCHASED EQUIPMENT EXPECTED TO BE COMPLETED AS SCHEDULED. ENGRG WORK STARTED TO DESIGN SYSTEM AND CONNECT UTILITY LINES IN PILOT DRYING PLANT. AFTER OEBUGGING OF INSTRUMENTS, INITIAL TRIALS AND TESTS WILL BEGIN.	143.4	41.4	35.5	SEP 83	SEP 83
5 78 4149	LOADING OF 30MM ADEN/DEFA HEDP AMMUNITION EXTRUSION PROCESS FOR THE PROJECTILE, HOT FORGING PROCESS FOR THE FLUTED LINER AND HEDP PROJECTILE CHARGING PROCESS HAVE BEEN DEFINED AND ACCOMPLISHED. THESE PROCESSES ARE BEING USED FOR PRODUCTION.	498.5	405.7	92.8	MAY 79	APR 83
5 78 4150	NEW MANUFACTURING PROCESSES FOR SAMS AMMUNITION NO STATUS GIVEN. THIS WORK IS COMPLETE AND THIS PROJECT SHOULD BE CLOSED OUT.	61.4	19.3	32.9	SEP 80	SEP 83

MANUFACTURING METHODS AND TECHNOLOGY PROGRAM
SUMMARY PROJECT STATUS REPORT
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PROJ NO.	TITLE + STATUS	AUTHORIZED (\$000)	CONTRACT VALUES (\$000)	EXPENDED LABOR AND MATERIAL (\$000)	ORIGINAL PROJECTED COMPLETE DATE	PRESENT PROJECTED COMPLETE DATE
5 79 4150	NEW MANUFACTURING PROCESSES FOR SMALL CALIBER PENETRATORS THE CONTRACTOR COMPLETED PROCESS SELECTION FOR THE BULLET ASSEMBLY. A FINAL REPORT DRAFT WAS SUBMITTED AND APPROVED. PUBLICATION OF THE FINAL REPORT IS SCHEDULED FOR MARCH 83.	376.0	220.0	139.2	MAR 81	SEP 83
5 80 4150	NEW MANUFACTURING PROCESSES FOR S&W AMMUNITION THE 250,000 ROUND FINAL ACCEPTANCE RUN FOR THE ASSEMBLY OF THE M855 BALL BULLET WAS INITIATED. MACHINE OPERATION, SUSPENDED IN MID DECEMBER FOR LACK OF SUFFICIENT ACCURACY TEST BARRELS, IS SCHEDULED TO RESUME IN FEB 83.	489.0	335.7	152.7	JUN 82	JUL 83
5 81 4150	NEW MANUFACTURING PROCESSES FOR SMALL CALIBER PENETRATORS INSTALLATION OF SKEWED AXIS ROLL FORMING EQUIPMENT HAS BEEN DEFERRED PENDING COMPARATIVE COST ANALYSIS OF THE SKEWED AXIS ROLL FORMING AND COLD HEADING ALTERNATIVE. THE ANALYSIS AND DECISION/RECOMMENDATION WILL BE COMPLETED BY 31 MAR 83.	211.0	64.2	119.4	JUL 82	JUL 83
5 82 4161	PRODUCTION TECHNIQUES FOR IMPROVED SMOKE MUNITION (81 MM) STOKES PRESS SET UP, DEBUGGED AND PRESSING STUDIES INITIATED. SENSITIVITY STUDIES ON BLENDED MATERIAL COMPLETED. EVALUATION OF R+D BLENDING AND PRESSING PROCEDURES CONTINUED. INITIATED BLENDER COMPARISON STUDIES.	476.0		82.0	JUL 83	FEB 84
5 80 4189	HIGH FRAGMENTATION STEEL PRODUCTION PROCESS CONTRACTOR HAS ANALYZED MATERIAL FROM NICK AND BREAK PARTING. FY82 PROJECT IS CANCELLED. THE FY80 PROJECT IS BEING REVISED TO ADJUST FOR THIS.	1,048.0	550.7	484.3	JAN 81	SEP 83
5 82 4200	TNT CRYSTALLIZER FOR LARGE CALIBER MUNITIONS HAZARD ANALYSIS COMPLETED. CONCEPT DESIGN DRAWINGS FOR THE NEW CRYSTALLIZER SYSTEM HAVE BEEN SUBMITTED BY CONTRACTOR FOR REVIEW.	366.0	188.5	118.7	DEC 84	DEC 83
5 80 4210	DRY CUTTING OF ENERGETIC MATERIALS EXTENSIVE BUILDING MODIFICATIONS COMPLETED AND MOST OF EQUIPMENT INSTALLED. ELECTRICAL DRAWINGS COMPLETED AND APPROVED. ELECTRICAL MATERIAL IS BEING ORDERED. REMOTE CONTROL STATION IS INSTALLED. MILESTONES REVISED REFLECTING ADDL FUNDING APPROVED SEP	622.2	453.7	113.6	MAY 82	DEC 82
5 81 4225	RED WATER POLLUTION ABATEMENT SYSTEM RECOMMENDATIONS FROM VE STUDY OF MCA FACILITY INCORPORATED INTO DESIGN. ADSORPTION TOWER TESTS COMPLETED AT RADFORD AAP. AFTERBURNER TESTS USING BUTANE AND NATURAL GAS COMPLETED.	157.7	57.7	92.0	MAR 83	MAR 83
5 81 4226	ON-LINE MONITORS FOR WATER POLLUTANTS SITE PREPARATION FOR FIELD TESTING OF FOUR CONTINUOUS MONITORS AT RAAP NEARLY COMPLETED. DESIGN OF SRP CONTROL SYSTEM AND POLLUTANT MONITORS COMPLETED. TEST PLAN FOR FIELD TESTING OF FOUR CONTINUOUS MONITORS AT HAAP HAS BEEN COMPLETED.	432.6	318.6	102.5	SEP 82	JUN 84

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5 81 4231	IN-PLANT REUSE OF POLLUTION ABATED WATERS FUNDS WERE WITHDRAWN FROM LA AAP AND ADDED TO MILAN AAP TO EVALUATE PILOT-SCALE TREATMENT OF CONTAMINATED WASTEWATER. FOR EVENTUAL RECYCLE + REUSE. ALL TECHNICAL WORK AT LONE STAR COMPLETED. IT IS NOT ECONOMICAL AT THIS TIME TO TREAT LONE STAR WATER.	460.5	299.6	160.9	JUN 83	JUN 84
5 82 4231	IN-PLANT REUSE OF POLLUTION ABATED WATERS TREATMENT CHEMICAL UTILIZATION SURVEY COMPLETED AT PBA. CARBON, ALUM, LIME, POLYMER AND H2504 CONTAMINANTS FOUND IN EFFLUENT WASTEWATER. POSSIBLE USES OF POLLUTION ABATED EFFLUENT FROM CMTF BEING INVESTIGATED. POTENTIAL USE IS AS PROCESS/DILUTION H2O.	313.0	172.7	106.0	JUN 84	JUN 84
5 81 4266	MANUF, INSPECT + TEST EQUIP FOR MAGNETIC POWER SUPPLY THE DESIGN WORK FOR ALL TOOLING AND EQUIPMENT NEEDED FOR THE MANUFACTURE OF THE MAGNETIC POWER SUPPLY IS COMPLETE. FABRICATION FOR THE ACCEPTANCE TEST CONSOLE AND THE CENTRIFUGE ARMING TIME TEST CONSOLE IS APPROXIMATELY 66 PERCENT COMPLETE.	759.0	483.0	211.0	SEP 83	DEC 83
5 81 4267	CONTINUOUS PROCESS FOR GRANULAR COMP B ***** DELINQUENT STATUS REPORT *****	160.0	158.8		SEP 82	JUN 83
5 82 4267	CONTINUOUS PROCESS FOR GRANULAR COMP B BIDS FOR SCOPE OF WORK FOR TEST RIG WERE RECEIVED IN NOV 82. EVALUATION OF BIDS COMPLETED IN JAN 83. CONTRACT AWARD IS SCHEDULED FOR 3 QTR 83.	290.0		51.0	MAR 84	MAR 84
5 82 4273	AUTOMATED PRODUCTION OF STICK PROPELLANT CONTRACT AWARDED TO RADFORD AAP. DESIGN CONCEPT CHOSEN FOR EVALUATION WITH 4-INCH DIA VERTICAL PRESS USING SINGLE DIE. THIS USES A ELECTROMAGNETIC CUTTER TO CUT CONTINUOUS EXTRUDING STRAND UPON COMMAND OF A LED LENGTH SENSOR. PNEUMATIC CONVEYOR USED.	821.2	689.2	72.0	DEC 83	AUG 84
5 80 4281	CONSERVATION OF ENERGY AT ARMY AMMUNITION PLANTS SEE THE FOLLOWING INDIVIDUAL TASKS FOR WORK STATUS.	1,230.5	918.9	311.4	JUN 82	DEC 83
5 80 4281 A01	PROCESS ENERGY INVENTORY AUDIT OF LINES 1, 2, AND 3A AT IOWA AAP WAS COMPLETED AND A FINAL REPORT IS BEING PREPARED. A FINAL TECHNICAL REPORT ON ELECTRIC MOTOR USAGE AT KANSAS AAP WAS PUBLISHED.	491.0	359.5	131.4	DEC 81	MAR 83
5 80 4281 A04	ENERGY RECOVERY FROM WASTE HEAT PROJECT NOT ECONOMICAL UNDER CURRENT PRODUCTION RATES. FINAL REPORT BEING PREPARED.	447.1	369.0	78.0	JUL 81	MAR 83

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PROJ NO.	TITLE + STATUS	AUTHORIZED (\$DDD)	CONTRACT VALUES (\$DDD)	EXPENDED LABOR AND MATERIAL (\$DDD)	ORIGINAL PROJECTED COMPLETE DATE	PRESENT PROJECTED COMPLETE DATE
5 8D 4281 AD6	UNCOOLED PRODUCER GAS FOR KETENE MANUFACTURE PREVIOUSLY PURCHASED EQUIPMENT WAS INSTALLED AND DEBUGGED.	292.4	190.4	102.D	JUN 82	SEP 83
5 81 4281	CONSERVATION OF ENERGY AT ARMY AMMUNITION PLANTS SEE THE FOLLOWING INDIVIDUAL TASKS FOR WORK STATUS.	1,142.D	764.6	335.0	SEP 84	DEC 84
5 81 4281 AD4	ENERGY RECOVERY FROM WASTE HEAT WORK SUSPENDED PENDING APPROVAL OF MODIFIED SOW ALLOWING EXTENSION OF EFFORT TO THE SOLVENT DISTILLATION COLUMNS.	361.9	192.6	155.4		DEC 84
5 81 4281 AD6	UNCOOLED PRODUCER GAS FOR KETENE MANUFACTURE THE SYSTEM WAS CHECKED OUT USING INERT GAS, COLD, CLEAN PRODUCER GAS AND HOT, UNSCRUBBED PRODUCER GAS. INITIAL DATA INDICATES A LARGE TEMPERATURE DROP BETWEEN THE PRODUCER GAS CYCLONE AND THE BOILER. UNSCRUBBED GAS TESTING IS CONTINUING.	129.6	76.6	43.0	MAR 84	DEC 84
5 81 4281 AD8	CAVITATIONAL REMOVAL OF EXPLOSIVES TESTING OF THE REMOVAL OF EXPLOSIVES IS CONTINUING. REMOVAL OF TNT FROM THE SHELLS IS STILL DIFFICULT AND ALTERNATE CUTTING HEAD DESIGNS ARE BEING FABRICATED TO INCREASE THE EFFICIENCY OF TNT REMOVAL.	231.0	174.6	54.D	JUN 83	SEP 83
5 81 4281 A1D	USE OF 810MASS AS ENERGY SOURCES AT ARMY AMMUNITION PLANTS EVALUATION OF THE USE OF 810MASS AS A FUEL SOURCE AT LONGHORN, TWIN CITIES AND HOLSTON AAP IS CONTINUING. INITIAL DATA FOR KANSAS, INDIANA AND MILAN AAP INDICATES ON-SITE PLANTATIONS ARE NOT COST EFFECTIVE BUT ADEQUATE OUTSIDE SOURCES EXIST.	271.8	227.0	32.6	SEP 83	JUN 83
5 81 4281 A12	POWER PRODUCTION FROM WASTE HEAT THE MAC/SAC WAS SELECTED TO BE THE SITE TO INSTALL AN ORGANIC RANKINE CYCLE ENGINE TO GENERATE ELECTRICITY. PROCESS DESIGN CRITERIA PREPARATION COMPLETED.	147.8	93.8	50.D	SEP 84	DEC 85
5 82 4281	CONSERVATION OF ENERGY AT ARMY AMMUNITION PLANTS SEE THE FOLLOWING INDIVIDUAL TASKS FOR WORK STATUS.	1,370.D	1,072.1	159.1	SEP 84	DEC 85
5 82 4281 AD1	PROCESS ENERGY INVENTORY AN ENERGY AUDIT OF ELECTRIC MOTORS AT LONE STAR AAP WAS COMPLETED AND A FINAL REPORT IS BEING PREPARED. RADFORD AAP INITIATED PLANS TO CONDUCT A PROCESS ENERGY INVENTORY OF THE TNT AREA.	193.5	136.6	53.D	JUN 84	JUN 84
5 82 4281 AD4	ENERGY RECOVERY FROM WASTE HEAT EQUIPMENT INSTALLATION OF THE HEAT PIPE HEAT RECOVERY SYSTEM HAS BEEN RESUMED. A HYDRAULIC SYSTEM FOR REMOTE REMOVAL OF THE BOTTOM DOMES OF THE HEAT EXCHANGERS FOR INSPECTION WAS COMPLETED.	419.4	283.5	73.5	SEP 84	DEC 85

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PROJ NO.	TITLE + STATUS	AUTHO- RIZED	CONTRACT VALUES	EXPENDED LABOR AND MATERIAL (\$000)	ORIGINAL PROJECTED COMPLETE DATE	PRESENT PROJECTED COMPLETE DATE
5 82 4281 A12	POWER PRODUCTION FROM WASTE HEAT SPECIFICATIONS COVERING THE DESIGN OF AN ORGANIC RANKINE CYCLE ENGINE HAVE BEEN PREPARED. INITIATIONS TO BIO SENT OUT.	427.0	355.0	15.6	JUN 84	DEC 85
5 82 4281 C01	PROCESS ENERGY INVENTORY AT PINE BLUFF ARSENAL PINE BLUFF ARSENAL INITIATED AN ENERGY AUDIT TO IDENTIFY PROBLEMS AND SOLUTIONS TO INEFFICIENT ENERGY USE.	322.0	297.0	17.0		DEC 84
5 81 4285	TNT EQUIVALENCY TESTING FOR SAFETY ENGINEERING CONDUCTED TESTS ON XM37 PROPELLANT. INITIATED TEST PLAN UN M-8 PROPELLANT. SUBMITTED 120 MM EXPLOSIVE FILL TEST PLAN FOR SAFETY APPROVAL.	441.0	284.5	116.4	SEP 83	JUN 83
5 82 4285	TNT EQUIVALENCY TESTING FOR SAFETY ENGINEERING DEVELOPED TEST PLAN FOR CLOSE-IN TESTS OF SHAPE EFFECT FOR SPHERES, CUBES, AND CYLINDERS. CONDUCTED PRELIMINARY TESTS UN SPHERES TO DETERMINE GAGE ARRAY AND BLAST EFFECT UN GAGES AND SUPPORT EQUIPMENT.	251.0	60.0	22.4	JUN 84	SEP 84
5 81 4288	EXPLOSIVE SAFE SEPARATION AND SENSITIVITY CRITERIA TEST PLAN FOR 120MM CARTRIDGES HAS BEEN SAFETY APPROVED. FRAGMENT IMPACT STUDIES WERE COMPLETED. INITIAL PHASE OF DUST PARAMETER AND ELECTROSTATIC DISCHARGE DATA STUDIES WAS COMPLETED.	620.0	318.0	271.8	JUN 83	JUN 83
5 82 4298	EVALUATION OF DIMETHYLNITROSAMINE DISPOSAL ON HAAP B-LINE GENERATION OF DESIGN PARAMETERS AND PROCESS DESIGN HAS BEEN INITIATED.	390.0	124.0	166.6	DEC 83	DEC 83
5 80 4309	PROPELLANT PROCESS DEVELOPMENT FOR 120MM TANK AMMUNITION SEE INDIVIDUAL SUBTASKS FOR WORK STATUS.	3,801.0	3,473.6	402.0	JUN 82	SEP 83
5 80 4309 01	DEVELOP MFG METHODS FOR STICK AND JA-2 PROPELLANT FINAL REPORT ON PROPELLANT PROCESS BEING SUBMITTED.	1,821.0	1,667.0	154.0	DEC 82	JUN 83
5 80 4309 D2	EXPLOSIVE LOADING OF 120MM HEAT-MP NO CHANGE SINCE LAST STATUS REPORT.	338.0	251.0	87.0	DEC 82	JUN 83
5 80 4309 03	ASSEMBLY PROCESS DEVELOPMENT THE BONDING ALIGNMENT CARTS, PROPELLANT LOADING STATION AND THE EQUIPMENT TO ASSEMBLE THE BASE CASE TO THE COMBUSTIBLE CARTRIDGE CASE ARE IN USE AT IOWA AAP. THE FINAL REPORT IS BEING PREPARED.	685.0	597.0	88.0	JUN 82	JUN 83
5 80 4309 06	PROCESS FOR MOLDING REAR SEAL, 120MM APDS TASK HAS BEEN COMPLETED. FINAL TECHNICAL REPORT TO BE DISTRIBUTED.	919.0	874.0	45.0	JUN 82	MAR 83

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PROJ NO.	TITLE + STATUS	AUTHD- RIZED (\$000)	CONTRACT VALUES (\$000)	EXPENDED LABOR AND MATERIAL (\$000)	ORIGINAL PROJECTED COMPLETE DATE	PRESENT PROJECTED COMPLETE DATE
5 81 4309	AMMUNITION FOR THE 120MM TANK MAIN ARMAMENT SEE INDIVIDUAL SUBTASKS FOR WORK STATUS.	3,522.0	2,990.9	403.2	JUN 83	MAR 84
5 81 4309 D1	MFG METHODS FOR STICK + JA-2 PROPELLANT THREE BATCHES OF DEGDN HAVE BEEN MADE WITH AN 86 PERCENT YIELD AND WITH SPENT ACID RECOVERY. SWISS CUTTER MOUNTS AND TAKE-AWAY EQUIPMENT FABRICATED AND EVALUATION IS SCHEDULED FOR 2QFY83.	984.0	837.0	117.9	JUN 83	JUN 83
5 81 4309 02	EXPLOSIVE LOADING OF 120MM HEAT-MP-T PRESS TOOLING WAS RECEIVED AND INSTALLED. INERT TESTING COMPLETED AND EXPLOSIVE TESTING UNDERWAY. EXPLOSIVE LOAD ACCEPTANCE CRITERIA AND STATIC TEST FIRING PROCEDURES HAVE BEEN APPROVED.	516.0	438.0	70.6	JUN 83	JUN 83
5 81 4309 03	ASSEMBLY PROCESS DEVELOPMENT EQUIPMENT FOR PRIMER TORQUING, STAKING GAGING AND RESISTANCE TESTING COMPLETED AND BEING INSTALLED AT IDWA AAP.	920.0	810.0	95.4	JUN 83	JUN 83
5 81 4309 D4	COMBUSTIBLE CARTRIDGE CASE PROCESS - 120MM DESIGN DRAWINGS AND SPECIFICATIONS FOR THE IMPREGNATION AND PUST IMPREGNATION EQUIPMENT HAVE BEEN COMPLETED AND APPROVED. CONTRACTORS FINAL REPORT BEING PREPARED.	215.0	185.0	25.0	JUN 83	SEP 83
5 81 4309 D5	FORMING OF SABOT SEGMENTS TO NET SHAPE ON APFSDS AMMO APPROXIMATELY 40D SABOT SEGMENT FORGINGS WERE PRODUCED AND FOUND TO BE MARGINAL WITH RESPECT TO THE ABILITY TO CLEAN UP ON FINAL MACHINING. A NEW DIE HAS BEEN DESIGNED AND AN ECONOMIC ANALYSIS FOR COST EFFECTIVENESS IS BEING CONDUCTED.	466.0	413.0	33.2	JUN 83	MAR 84
5 81 4309 09	INVESTIGATE FORMING + HEAT TREAT METHODS F/CORE, APDS CUTTING TOOL INSERT STUDY PRELIMINARY RESULTS INDICATE THAT CERAMIC INSERTS ARE UNACCEPTABLE. FURTHER TESTING IS UNDERWAY.	313.0	263.0	44.6	JUN 83	DEC 83
5 81 4309 12	INJECTION MOLDING LF XM829 OBTURATOR MOLD DESIGN COMPLETED AND FABRICATION STARTED. MOLDING MATERIAL AND MOLD APPROVED. OBTURATORS MOLDED AND MACHINED AT CONTRACTORS PLANT AWAITING INSPECTION.	111.0	91.0	16.4	JUN 83	OEC 83
5 82 4309	AMMUNITION FOR THE 120MM TANK MAIN ARMAMENT SEE INDIVIDUAL SUBTASKS FOR WORK STATUS.	3,960.0	3,272.7	130.6	SEP 84	SEP 84
5 82 4309 02	EXPLOSIVE LOADING OF 120MM HEAT-MP THE SCOPE OF WORK HAS BEEN APPROVED.	502.0	392.0	62.4		MAR 84
5 82 4309 D4	COMBUSTIBLE CARTRIDGE CASE, 120MM WORK HAS BEEN INITIATED TO DEVELOP A WHITE WATER RECYCLING AND TREATMENT SYSTEM TO SUPPORT COMBUSTIBLE CARTRIDGE CASE MANUFACTURE. PRE AND POST IMPREGNATION EQUIPMENT FABRICATION IS UNDERWAY AND ABOUT 30 PERCENT COMPLETE.	2,874.0	2,396.7	64.6		MAR 84

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5 82 4309 D9	INVESTIGATE FORMING + HEAT TREAT METHODS F/CORE, APDS SUBCONTRACT PLACED WITH NUCLEAR METALS INCORPORATED (NMI). TEST PLAN BEING DEVELOPED AND MATERIAL FOR INITIAL TESTING HAS BEEN CAST AND EXTRUDED.	434.0	374.0	3.6	JUN 84	
5 8D 4310	DMSO RECRYSTALLIZATION OF RDX/HMX A STUDY OF THE INTERACTION HEALTH EFFECTS OF DMSO WITH OTHER CHEMICALS WAS COMPLETED. TOXIC STUDY OF IN-PROCESS STREAM SAMPLES FROM PREVIOUS DMSO PILOT PLANT OPERATIONS CONTINUED. ACUTE TESTING OF SAMPLES WAS INITIATED.	349.0		313.7	JUN 81	SEP 83
5 77 4311	DEVELOP AUTOMATED PRODUCTION EQUIPMENT FOR XM 692 THE OVERLAY ASSEMBLY AND PLUG PULLER MACHINES ARE IN PRODUCTION USE AT LOUISIANA AAP. THE MOLDING MACHINE WAS COMPLETED AND DELIVERED, HOWEVER, DESIGN CHANGES HAVE ELIMINATED THE NEED FOR THIS EQUIPMENT.	1,452.9	1,184.1	268.8	AUG 78	JUN 83
5 81 4311	DEVELOP AUTOMATED PRODUCTION EQUIPMENT FOR XM 692 THE OVERLAY/KILL MECHANISM AND DETONATING CORD WRAP MACHINES WERE DELIVERED TO LOUISIANA AAP AND ARE AWAITING INSTALLATION. OPERATING AND MAINTENANCE MANUALS WERE COMPLETED AND DISTRIBUTED.	460.0	424.0	26.0	SEP 82	JUN 83
5 82 4312	ANTI-ARMOR CLUSTER MUNITION PRODUCTION EXPLOSIVE INJECTION DESIGN FOR THE ACM PRODUCTION PROTOTYPE INJECTION MOLDING UNIT WAS COMPLETED. TERMINATION OF THE ACM RESULTED IN REDIRECTION OF THE PROGRAM TO DEVELOP AN INJECTION MOLDING UNIT TO LOAD THE CEM.	550.5	516.8	33.7	JUN 83	SEP 84
5 8D 4341	IMPROVED NITROCELLULOSE PURIFICATION PROCESS RESULTS INDICATE THE CONICELL CONTINUOUS TUBE COOKER IS CAPABLE OF CARRYING OUT THE POACHING OPERATION OF THE NC PURIFICATION PROCESS. EVALUATIONS OF ACID BOIL IN THE CONICELL FOLLOWED BY POACHING IN THE CONICELL WERE INITIATED.	753.2	587.0	166.0	DEC 81	JUN 83
5 81 4341	IMPROVED NITROCELLULOSE PURIFICATION PROCESS SAFETY MODIFICATIONS TO THE CONICELL WERE INSTALLED. A REVISED NITROCELLULOSE SPECIFICATION IS BEING PREPARED.	617.0	215.6	244.0	MAR 83	SEP 83
5 82 4341	IMPROVED NITROCELLULOSE PURIFICATION PROCESS TEST PROGRAM REQUESTS FOR GUN FIRING TESTS WITH CONICELL PURIFIED NC WERE PREPARED.	370.0	158.9	2.1	SEP 83	SEP 83
5 81 4344	ESTABLISH WASTE DISPOSAL TECHNIQUE FOR M687 BINARY PROJECT SELECTIVE AQUEOUS NEUTRALIZATION STUDIES WERE COMPLETED. DF EQUILIBRIUM CURVE WAS CONFIRMED BY ADDITIONAL DATA.	200.0		181.0	DEC 82	JUN 83

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PROJ NO.	TITLE & STATUS	AUTHORIZED (\$000)	CONTRACT VALUES (\$000)	EXPENDED LABOR AND MATERIAL (\$000)	ORIGINAL PROJECTED COMPLETE DATE	PRESENT PROJECTED COMPLETE DATE
5 82 4344	ESTABLISH WASTE DISPOSAL TECHNIQUE FOR M687 BINARY PROJECT OF PILOT DISTILLATION CONTRACT WAS AWARDED TO ARTISAN INDUSTRIES IN SEP 82. THE ENGINEERING PORTION OF THE CONTRACT WAS COMPLETED.	380.0	180.0	28.0	NOV 83	NOV 83
5 78 4349	MODERNIZATION OF PRESS LOADING FOR HEP PROJECTILES INSTALLATION OF PRESS AND RELATED EQUIPMENT NEARING COMPLETION. PROVE OUT IS SCHEDULED FOR 3QFY83.	322.5		281.0	JUN 80	SEP 83
5 80 4357	NONDESTRUCTIVE TEST EQUIP F/LARGE CALIBER MUNITIONS F/M483A1 SEE PROJECT NO 5 82 4357 FOR STATUS.	554.0	450.0	104.0	JUN 83	OCT 83
5 82 4357	NONDESTRUCTIVE TEST EQUIP F/LARGE CALIBER MUNITIONS F/M483A1 THE FABRICATION AND SYSTEM DEBUGGING HAS BEEN COMPLETED. THE APPLICATIONS TESTING CONTRACT WAS AWARDED. THE ACCEPTANCE TEST AND EVALUATION WAS SUCCESSFULLY COMPLETED.	124.0	69.0	8.0	OCT 83	OCT 83
5 81 4364	ON-LINE 810 SENSORS TO MONITOR MIXED WASTE STREAMS CONTINUED BIOASSAYING AND VENTILATORY MONITORING. COMPARISONS BETWEEN THE COMBINED WASTE WATER SYSTEM AND CENTRAL WASTE WATER TREATMENT FACILITY EFFLUENTS CONTINUED. DEVELOPMENT OF A TECH MANUAL WAS INITIATED.	258.0	211.0	47.0	JUN 83	OCT 83
5 82 4364	ON-LINE 810 SENSORS TO MONITOR MIXED WASTE STREAMS SEE STATUS REPORT FOR 581 4364.	290.0	227.0	54.0	SEP 83	OCT 83
5 82 4406	IMPROVING THE YIELD OF HMX DURING RDX NITROLYSIS ACHIEVED UP TO 27 PERCENT HMX USED BENCH SCALE RDX/HMX COPRODUCT NITROLYSIS REACTOR. FEASIBILITY OF COPRODUCT SEPARATION USING ACETIC ACID DEMONSTRATED. SEPARATION VIA OTHER SOLVENTS UNDER INVESTIGATION.	633.0	494.1	38.6	DEC 83	DEC 83
5 80 4417	PROCESS TECHNOLOGY FOR BLENDING RP SMOKE COMPOSITIONS PROJECT COMPLETED.	115.0		115.0	MAY 81	SEP 81
5 81 4417	PROCESS TECHNOLOGY FOR BLENDING RP SMOKE COMPOSITIONS INSTALLATION OF EQUIPMENT FOR RP HANDLING STUDIES HAS BEGUN AT PINE BLUFF ARSENAL. MATERIALS HANDLING STUDIES OF MANGANESE DIOXIDE WERE COMPLETED BY CONTRACTOR.	165.0	80.0	82.0	SEP 82	JUN 83
5 82 4417	PROCESS TECHNOLOGY FOR BLENDING RP SMOKE COMPOSITIONS FIRE DETECTION AND SUPPRESSION STUDIES ARE CONTINUING WITH SUCCESS. INITIATED PREPARATION OF PROCESS HAZARDS ANALYSIS.	458.0	433.0	6.0	SEP 83	SEP 84
5 79 4444	BODY FOR M42/M46 GRENADE GRENADE BODIES MADE BY DAYRON WERE LOADED AT LONE STAR AAP FOR TEST AP ARRADCOM. SUPPLIER M8A WAS AUTHORIZED TO PROCEED WITH TASK 2 OF THE MODIFIED CONTRACT. A QUANTITY OF M46 GRENADE BODIES WERE COMPLETED BY M8A COMPANY.	563.0	238.7	209.7	SEP 80	OCT 83

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PROJ NO.	TITLE + STATUS	AUTHORIZED (\$000)	CONTRACT VALUES (\$000)	EXPENDED LABOR AND MATERIAL (\$000)	ORIGINAL PROJECTED COMPLETE DATE	PRESENT PROJECTED COMPLETE DATE
5 81 4449	PROCESS IMPROVEMENT FOR COMPOSITION C-4 BATCHES OF DIRECT COATED LX-14-0 WERE SUCCESSFULLY MANUFACTURED MEETING ALL SPECS. THE LX-14-0 AND PBX-0280 WERE SUCCESSFULLY OPERATED ON THE EIMCO BELT FILTER. NAUTAMIX BLENDER/DRYER WILL BE INSTALLED AND EVALUATED IN FEB-APR 83.	290.1	191.1	88.1	JUN 83	SEP 83
5 79 4454	AUTO INSPECTION DEVICE EXPLOS CHARGE SHELL (AIDECS) CAM SEE PROJECT NO 5 82 4454 FOR PROJECT AND FUNDING STATUS.	878.0			DEC 81	JUL 84
5 80 4454	AUTO INSPECTION DEVICE EXPLOS CHARGE SHELL (AIDECS) CAM SEE PROJECT NO 5 82 4454 FOR PROJECT AND FUNDING STATUS.	1,298.0			APR 82	JUL 84
5 80 4454 01	AUTOMATIC INSPECTION DEVICE FOR EXPLOSIVE CHARGE IN SHELL (A SEE PROJECT NO 5 82 4454-1 FOR PROJECT AND FUNDING STATUS.				APR 82	APR 83
5 80 4454 02	AUTOMATIC X-RAY INSPECTION SYSTEM (AXIS) SEE PROJECT NO 5 82 4454-2 FOR PROJECT AND FUNDING STATUS.				AUG 80	JUL 83
5 81 4454	AUTO INSPECTION DEVICE EXPLOS CHARGE SHELL (AIDECS) CAM SEE PROJECT NO 5 82 4454 FOR PROJECT AND FUNDING STATUS.	1,885.0			OCT 82	JUL 84
5 81 4454 01	AUTOMATIC INSPECTION DEVICE FOR EXPLOSIVE CHARGE IN SHELL SEE PROJECT NO 5 82 4454-1 FOR PROJECT AND FUNDING STATUS.				MAY 82	APR 83
5 81 4454 02	AUTOMATIC X-RAY INSPECTION SYSTEM (AXIS) SEE PROJECT NO 5 82 4454-2 FOR PROJECT AND FUNDING STATUS.				OCT 82	JUL 84
5 82 4454	AUTO INSPECTION DEVICE EXPLOS CHARGE SHELL (AIDECS) CAM SEE SUBTASKS BELOW FOR PROJECT STATUS.	6,931.0	5,842.2	779.2	JUL 83	JUL 84
5 82 4454 01	AUTO INSP DEVICE FOR EXPLOSIVE CHARGE IN SHELL (AIDECS) THE ASSEMBLY AND DEMONSTRATION OF THE 155MM PROTOTYPE AIOECS SYSTEM WAS COMPLETED. THE DEVICE WAS SHIPPED TO AND ASSEMBLED AT ARRAOCOM OVER SITE. EXAMINATION OF HE-LOADED SHELL IS SCHEDULED TO BEGIN IN FEB 1983.				JUL 83	APR 83
5 82 4454 02	AUTO X-RAY INSPECTION SYSTEM (AXIS) THE A70 CONVERTER HAS BEEN WIRED AND INSTALLED IN THE AXIS SYSTEM. THE CAMERA SYSTEM HAS BEEN REFITTED WITH 4 MORE STABLE AMPLIFIER SECTION THEREBY REDUCING NOISE. TESTS INDICATE THAT FURTHER MODIFICATIONS ARE NECESSARY AT 4 COST OF \$300K.				JUL 83	JUL 84
5 79 4469	AUTOMATIC INSERTION OF GRENADE LAYERS TECHNICAL DATA PACKAGE FOR GRENADE INSERTION SYSTEM AVAILABLE AT ARRAOCOM.	1,146.5	933.5	200.0	JAN 80	SEP 83

MANUFACTURING METHODS AND TECHNOLOGY PROGRAM
SUMMARY PROJECT STATUS REPORT
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PROJ NO.	TITLE + STATUS	AUTHO- RIZED (\$000)	CONTRACT VALUES (\$000)	EXPENDED LABOR AND MATERIAL (\$000)	ORIGINAL PROJECTED COMPLETE DATE	PRESENT PROJECTED COMPLETE DATE
5 80 4469	AUTOMATIC INSERTION OF GRENADE LAYERS FINAL TECHNICAL REPORT WAS FORWARDED FOR PUBLICATION AND DISTRIBUTION. GRENADE INSERTION SYSTEM IS AT KANSAS AAP.	350.0	302.3	47.7	JAN 81	SEP 83
5 80 4484	IMPROVED HI-SPEED WATERPROOFING APPLICATION F/SC AMMO LAKE CITY WAS CONTRACTED TO FABRICATE AND MODIFY A SEALANT APPLICATOR PRIMER INSERT TURRET FOR PHASE II OF THIS EFFORT.	126.0	93.0	31.8	MAR 82	JAN 83
5 82 4489	ADVANCED POLLUTION ABATEMENT TECHNOLOGY F/DARCUM FACILITIES THIS IS AN ORDERLY TRANSITION OF PROJECTS 5XX4114 AND 57X4214 AND IS DIRECTED TO MEETING FUTURE STANDARDS. REFER TO INDIVIDUAL SUBTASKS FOR ADDITIONAL INFORMATION.	1,359.0	1,002.2	121.2	DEC 84	SEP 84
5 82 4489 01	DISPOSAL OF WASTEWATER TREATMENT SLUDGES RCRA OUTLINES NEED TO DEVELOP TECHNOLOGY FOR DISPOSAL OF SOLID WASTE FROM MUNITIONS MANUFACTURING AND WASTEWATER TREATMENT. THIS TASK IS DEVELOPING DESIGN DATA FOR IMPLEMENTATION OF 2 TECHNOLOGIES PROVEN FEASIBLE IN PRIOR R+D WORK.	422.5	367.9	22.5	DEC 84	SEP 84
5 82 4489 02	ADVANCED PINK WATER TREATMENT (TNT/RDX/HMX IN WATER). CARBON ADSORPTION IS NOT TOTALLY EFFECTIVE IN TREATMENT OF PINK WASTEWATER. THE AFFINITY IS DEPENDENT UPON NITROBODY SPECIES PRESENT. HOWEVER, EFFECTIVENESS CAN BE MAXIMIZED WITH A PROTOTYPE HYBRID CONFIGURATION WHICH IS BEING DEVELOPED IN THIS PROJ.	371.0	255.5	34.1	DEC 84	SEP 84
5 82 4489 03	TERTIARY TREATMENT OF HOLSTON WASTEWATER STUDIES SHOW THAT CARBON ADSORPTION DEMONSTRATES PREFERENTIAL ADSORPTIVITY FOR CERTAIN CONTAMINANTS WHICH NEGATES EFFECTIVENESS FOR NITRAMINE-NITROBODY CONTAINING WASTEWATERS. THIS CHARACTERISTIC IS BEING ADDRESSED AND TESTED IN THIS PROJECT SUBTASK.	155.5	110.8	12.8	DEC 84	SEP 84
5 82 4489 05	ADVANCED AIR EMISSIONS ABATEMENT DESIGN EXPANDED FROM 2-STAGE TO 4-STAGE SCRUBBER WHICH SIMULATES EXISTING EQUIPMENT FOR SCRUBBING OF NOX EMISSIONS FROM NC SYNTHESIS AT 1/25 SCALE. PROCUREMENT BEGUN FOR PILOT PLANT. HAZARD ANALYSIS IS IN PROGRESS. DELIVERY PILOT EQUIPMENT EXP 3QFYB3	410.0	268.0	51.8	DEC 82	SEP 84
5 79 4498	CONSOLIDATION AND AUTOMATIC ASSEMBLY OF SMALL MINES ***** DELINQUENT STATUS REPORT *****	572.0	480.0	92.0	SEP 80	JUN 83
5 80 4498	CONSOLIDATION AND AUTOMATIC ASSEMBLY OF SMALL MINES ***** DELINQUENT STATUS REPORT *****	392.0	100.0	283.0	DEC 81	JUN 83

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SUMMARY PROJECT STATUS REPORT
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PROJ NO.	TITLE + STATUS	AUTHORIZED (\$000)	CONTRACT VALUES (\$000)	EXPENDED LABOR AND MATERIAL (\$000)	ORIGINAL PROJECTED COMPLETE DATE	PRESENT PROJECTED COMPLETE DATE
5 81 4503	NEW PROCESS FOR S&WS TRACER AMMUNITION DEVELOPMENT OF THE PROTOTYPE PROCESS ON CONVENTIONAL EQUIPMENT HAS PROCEEDED TO THE DEMONSTRATION PHASE. BULLET JACKET COMPONENTS WERE PROCESSED THRU TO FIRST ASSEMBLY BULLET MANUFACTURE.	500.0	402.4	97.6	AUG 82	UCT 83
5 82 4503	NEW PROCESS FOR S&WS TRACER AMMUNITION NO SEPARATE WORK STATUS GIVEN FOR THIS PROJECT - SEE 5 81 4503.	129.0		48.1	SEP 83	OCT 83
5 81 4506	5.56 MM CARTRIDGE LINKING SYSTEM FABRICATION, DEBUG AND INSTALLATION OF THE S&WS 5056 MM CARTRIDGE LINKING MACHINE HAS BEEN COMPLETED.	573.0	398.0	163.0	JAN 83	JAN 84
5 82 4506	5.50MM CARTRIDGE LINKING SYSTEM REMINGTON ARMS AWARDED A SUBCONTRACT TO WELLS MARINE FOR 1/2 MILLION M27 LINKS TO BE USED IN FINAL ACCEPTANCE DEMONSTRATION.	577.0	238.0	93.0	JAN 84	JAN 84
5 8D 4508	PROCESS IMPROVEMENT OF PRESSABLE RDX COMPOSITIONS DELIVERY OF WYSSMONT DRYER DELAYED TO UNRESOLVED INDEMNIFICATION QUESTION.	505.8	333.8	158.3	APR 82	JUN 83
5 82 4508	PROCESS IMPROVEMENT OF PRESSABLE RDX COMPOSITIONS COMMERCIAL DRYERS BEING INVESTIGATED FOR POSSIBLE REPLACEMENT OF WYSSMONT DRYER.	359.0	231.9	24.9	SEP 84	JUN 83
5 82 4511	DISPOSAL OF FINAL SLUDGE FROM ACID RECOVERY OPERATIONS BENCH SCALE PROGRAM FOR CATALYTIC HYDROGENATION OF SPENT ACID SLUDGE FROM B-LINE PROCEEDING ON SCHEDULE WITH EXPECTED COMPLETION 01 MAR 83. INVESTIGATION OF CATALYST SUGGEST 1 PCT PD ON C GRANULAR CATALYST WORKS BEST.	304.0	216.9	12.4	DEC 83	NOV 83
5 82 4529	MANUFACTURE OF PRECISION CONES FOR HEAT PROJECTILES CONTRACT NEGOTIATIONS ARE CONTINUING. DIFFICULTIES WITH PRICE AND SCOPE ARE AS YET UNRESOLVED.	525.0		22.0	SEP 82	MAR 84
5 82 4534	XM855 BULLET CONVERSION OF SCAMP EQUIPMENT CONTRACT WAS AWARDED TO DESIGN, FABRICATE AND INSTALL A PAINT DIPPING AND DRYING SYSTEM FOR A LOAD AND ASSEMBLE SUBMODULE AT LAKE CITY AAP. THE FINAL DESIGN HAS BEEN REVIEWED AND APPROVAL IS EXPECTED BY FEB 83.	264.0	204.1	32.1	SEP 83	DEC 83
5 82 4548	PYRO SAFETY ENHANCEMENT SEE THE FOLLOWING TASKS FOR WORK STATUS.	490.6	182.6	200.3	JUL 83	MAR 84
5 82 4548 01	SAFETY ENHANCEMENT OF BATCH MIX MULLERS INERT SIMULANTS OF PYROTECHNIC COMPOSITIONS WERE BLENDED WITH BATCH MIX MULLER. LIVE FLAKE COMPOSITION AND IGNITER COMPOSITION WAS SUCCESSFULLY BLENDED IN THE MULLER MIXER.	172.0		84.4	FEB 83	JUN 83

MANUFACTURING METHODS AND TECHNOLOGY PROGRAM
SUMMARY PROJECT STATUS REPORT
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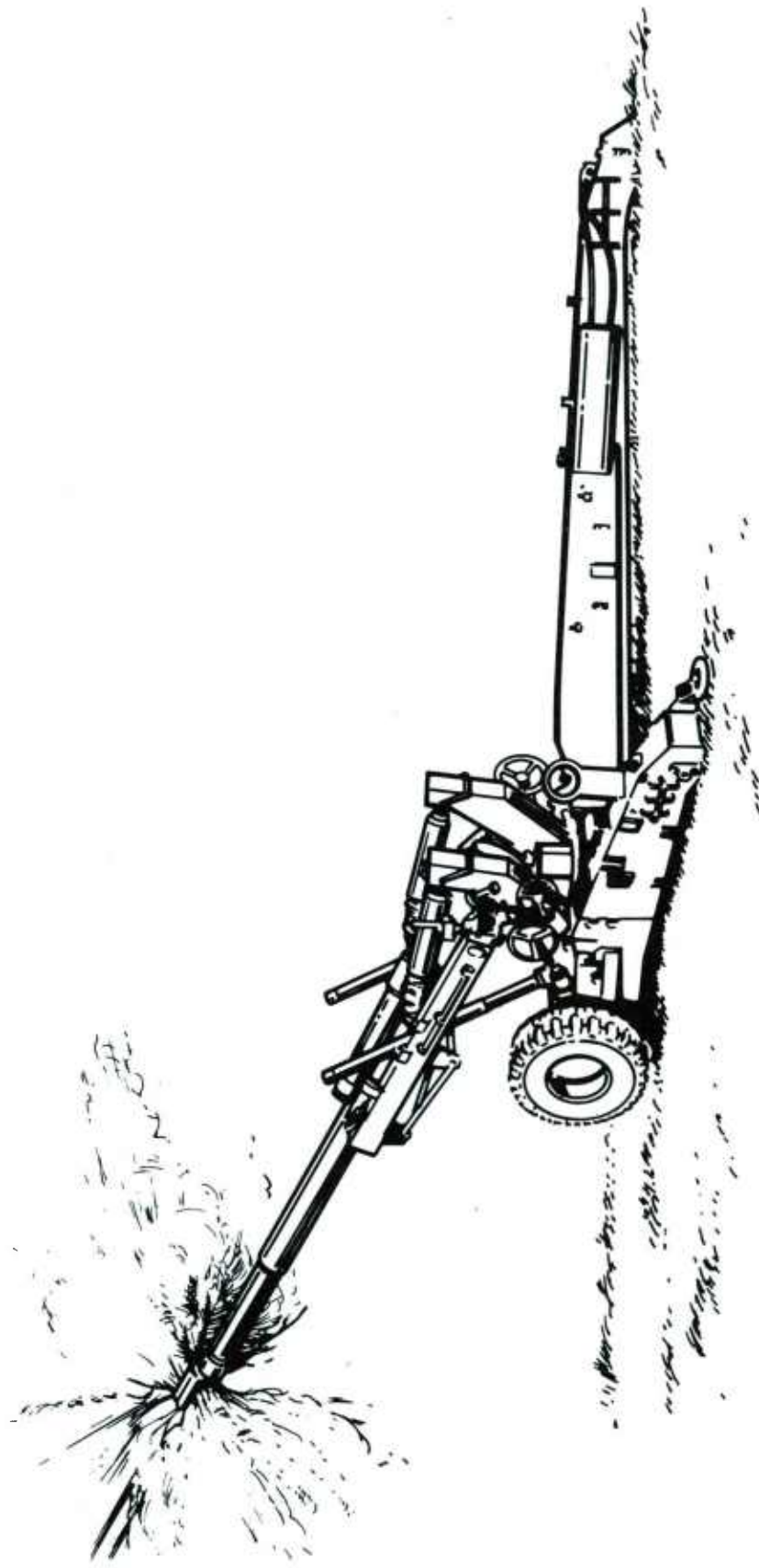
PROJ NO.	TITLE & STATUS	AUTHORIZED (\$000)	CONTRACT VALUES (\$000)	EXPENDED LABOR AND MATERIAL (\$000)	ORIGINAL PROJECTED COMPLETE DATE	PRESENT PROJECTED COMPLETE DATE
5 82 4548 02	SAFETY ENHANCEMENT TRANSPORT + CONVEYING BASED ON SURVEY REMOTE LOADERS AND REMOVAL CONVEYOR SYSTEMS WERE RECOMMENDED. THESE IMPROVEMENTS WERE RECOMMENDED FOR THE BATCH MIX MULLER, GRANULATOR AND DRYING OVENS.	123.4	68.4	46.7	JUL 83	NOV 83
5 82 4548 03	IMPROVEMENT OF FIRE SUPPRESSION SYSTEMS STUDIES OF CURRENT FIRE SUPPRESSION SYSTEMS INDICATE FALSE ALARM PROBLEMS AND LACK OF EXTENSIVE FIRE SUPPRESSION SYSTEMS AT SOME PLANTS.	101.3	59.3	22.9	JUN 83	DEC 83
5 82 4548 04	BAY DESIGN SAFETY ENHANCEMENT ON SITE CONDUCTED AT LONGHORN, LONE STAR AND PINE BLUFF ARSENAL. DRAWINGS WERE REVIEWED AND PLANT SURVEYS COMPILED.	93.7	54.7	19.4	MAY 83	MAR 84
5 82 4551	MANUFACTURING PROCESS PARAMETER FOR XM855/856 AMMO CONTRACT AWARDED AT LCAAP. THE QUALITY EVALUATION PLANS FOR THE M855 BALL ROUND WAS MODIFIED. FIRST ARTICLE TESTS FOR THE BALL CARTRIDGE LAP WERE INITIATED. OUTLINE TEST PLAN FOR THE SAW WEAPON/AMMUNITION VERIFICATION TEST WAS COMPLETED BY TECOM.	513.0	83.0	192.0	MAR 83	DEC 83
5 81 4553	PROCESS PARAMETERS FOR COLD DRAWING ALLOY STEELS ALL STEEL HAS BEEN RECEIVED. CHARACTERIZATION OF MATERIAL CHEMISTRY AND HARDENABILITY IS UNDERWAY.	216.0	195.0	21.0	DEC 82	JUN 83
5 82 4553	PROCESS PARAMETERS FOR COLD DRAWING ALLOY STEELS CONTRACT IS AWARDED. WORK UNDER CONTRACT HAS NOT BEGUN.	284.0	150.0	27.0	JUN 83	MAR 84
5 81 4555	INFRARED MONITORING OF PYROTECHNIC BLENDING PRELIMINARY TESTING AND CHECKOUT OF THERMOGRAPHY UNIT WAS ACCOMPLISHED. VAPOR LEVEL DETECTION UNIT WAS ORDERED.	250.0		131.0	JUN 82	SEP 83
5 82 4557	AREAT THE RETROFIT PROGRAM IS ON SCHEDULE (HARDWARE MODIFICATIONS AND FABRICATION). SPECIAL BALLISTIC TEST WILL BE CONDUCTED TO CHECK SOFTWARE TRACKING PROGRAM IN FEB 83 PRIOR TO THE TEAR-DOWN OF THE RADAR SYSTEM.	2,500.0	2,247.0	58.0	JUN 84	JUN 84
5 82 4558	THERMAL DEHYDRATION PROCESS SAFETY AND OPERATIONAL REDESIGN HAZARD ANALYSIS COMPLETED AND OPERATING CONDITIONS DEVELOPED. NO HAZARDOUS STATIC BUILD-UP WAS DETECTED. A DRAFT OF THE FINAL TECHNICAL REPORT WAS WRITTEN.	430.8	336.8	69.0	SEP 83	JUN 83
5 82 4560	MOD TAPE-STIFFENER ASSEMBLY PROCESS - M42/M46 GRENADES CONTRACT AWARDED TO KANSAS AAP. THE MAIN ASSEMBLY DIAL HAS BEEN SET UP OFF-LINE FOR CONTROL, CIRCUIT TRACING AND DEBUGGING. WASHER EMBLY DIAL HAS BEEN MADE OPERABLE.	141.5	106.5	19.9	JUN 83	JUN 83

MANUFACTURING METHODS AND TECHNOLOGY PROGRAM
S U M M A R Y P R O J E C T S T A T U S R E P O R T
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PROJ NO.	TITLE + STATUS	AUTHO- RIZED (\$000)	CONTRACT VALUES (\$000)	EXPENDED LABOR AND MATERIAL (\$000)	ORIGINAL PROJECTED COMPLETE DATE	PRESENT PROJECTED COMPLETE DATE
5 82 4563	XM803 METAL PARTS PRODUCTIVITY SEE INDIVIDUAL SUBTASKS FOR WORK STATUS.	768.0	525.1	93.5	JUN 84	JUN 84
5 82 4563 01	IMPROVED STRAIGHTNESS OF DU PENETRATOR BLANKS CONTRACT AWARDED. AS-EXTRUDED STRAIGHTNESS DATA OBTAINED FROM PROGRAM CONTROL GROUP. PURCHASE ORDERS FOR STRAIGHTENING EFFORTS COMPLETED.	303.1	278.1	5.0	JUN 84	SEP 84
5 82 4563 02	SALT BATH SOLUTION HEAT TREAT FOR DU PENETRATORS THE CONTRACTOR WILL DEMONSTRATE A VACUUM OUTGASSING/SALT SOLUTIONIZING HEAT TREATMENT PROCESS + COMPARE IT TO VACUUM SOLUTIONIZING. PROCUREMENT OF SALT BATH AND SALT FOR PROCESS EVALUATIONS HAS BEEN INITIATED.	185.4	147.1	4.0	MAR 84	MAR 84
5 82 4563 04	HEAT TRANSFER AND RESIDUAL STRESS PRELIMINARY COMPUTER EFFORTS HAVE BEEN COMPLETED AND INITIAL DISCUSSIONS FOR A JOINT PROGRAM WITH Y-12 HAVE BEEN ACCOMPLISHED. C-RAY ANALYSIS EFFORTS AT AMHRC ARE CONTINUING.	110.5		82.5	MAR 84	JUN 84
5 82 4563 05	REDUCTION OF CHIPS OXIDATION EQUIPMENT DESIGNS COMPLETED. ENCLOSURE FABRICATION PROCEEDING.	169.0	99.9	2.0	MAR 84	MAR 84
5 7T 6494	NEW CONCEPTS FOR MER AND INSPECT OF 20MM 25MM 30MM AMMO ***** DELINQUENT STATUS REPORT *****	1,079.0	963.0	116.0	AUG 79	JUN 83
5 75 6494	MANUFACTURE AND INSPECTION OF CAL.50, 20MM, AND 30MM AMMO ***** DELINQUENT STATUS REPORT *****	3,760.0	2,256.0	1,504.0	DEC 76	JUN 83
5 76 6494	MANUFACTURE AND INSPECTION OF CAL.50, 20MM, AND 30MM AMMO ***** DELINQUENT STATUS REPORT *****	1,196.0	819.0	377.0	DEC 77	JUN 83
5 77 6494	NEW CONCEPTS FOR MER AND INSPECT OF 20MM 25MM 30MM AMMO ***** DELINQUENT STATUS REPORT *****	573.0	46.0	527.0	JUN 79	JUN 83
5 82 6599	ELECTRO-OPTICAL INSPECTION OF ARTILLERY PROJ OPT CAVITY A SUITABLE LOCATION TO SET UP THE SYSTEM WAS MADE AVAILABLE IN JULY 82. THE SYSTEM WAS INSTALLED. THE DEBUGGING PHASE STARTED. HOWEVER, WORK WAS SUSPENDED IN DEC 82 DUE TO BUILDING RENOVATION WORK.	75.0		11.8	SEP 83	APR 83
5 79 6634	MFG OU ALLOYS FOR LARGE CALIBER ARMOR DEFEATING PROJECTILE THREAD FORMING PART OF TASK COMPLETED. A SECOND ELECTRON BEAM MELTING EXPERIMENT CONDUCTED. VACUUM INDUCTION AND E-BEAM APPEAR VIALE FOR MELTING OU CHIPS.	540.0	334.0	192.0	AUG 80	JUN 83

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PROJ NO.	TITLE + STATUS	AUTHORIZED SIZE (\$000)	CONTRACT VALUES (\$000)	EXPENDED LABOR AND MATERIAL (\$000)	ORIGINAL PROJECTED COMPLETE DATE	PRESENT PROJECTED COMPLETE DATE
5 79 6693	BALL PROPELLANT DETERRENT COATING-CAM RELATED PROJECT DELAYED BECAUSE OF PROJECT OFFICER RE-ASSIGNMENT. THE FINAL REPORT IS NOW BEING PREPARED AND WILL BE COMPLETED BY AUGUST 1983.	171.0	27.5	132.4	NOV 80	AUG 83
5 81 6716	OEV COMP-AID MODEL OF FORMING OPERATIONS FOR ARTILLERY MPTS SOFTWARE INTEGRATING FOUR SEPERATE METAL FORMING MODELS HAS BEEN DEVELOPED. THIS SOFTWARE IS CURRENTLY BEING TESTED.	157.0	131.0	24.0	DEC 82	JUN 83



ARMAMENT RESEARCH AND DEVELOPMENT COMMAND
ARMAMENT MATERIEL READINESS COMMAND
(ARRADCOM, ARRCOM)
(WEAPONS)

A R R C U M - A R R A O C L M (WEAPONS)

CURRENT FUNDING STATUS, 2ND CY82

FISCAL YEAR	NO. OF PROJECTS	AUTHORIZED FUNDS (\$.)	* * C O N T R A C T * * A L L O C A T E D (\$.)	F U N O I N G E X P E N D E D (\$.)	* * I N H O U S E * * R E M A I N I N G (\$.)	F U N O I N G E X P E N D E D (\$.)	* * I N H O U S E * * R E M A I N I N G (\$.)
76	1	350,000	285,200	285,200 (100%)	64,800	45,900 (70%)	
77	0	0	0	0 (0%)	0	0 (0%)	
77	2	1,205,000	1,034,500	984,300 (95%)	170,500	168,700 (98%)	
78	1	77,000	0	0 (0%)	77,000	77,000 (100%)	
79	4	598,600	323,100	320,600 (99%)	275,500	166,200 (60%)	
80	14	3,665,100	1,703,400	1,164,900 (68%)	1,961,700	1,526,600 (77%)	
81	24	5,898,800	2,641,900	721,300 (27%)	3,256,900	1,129,200 (34%)	
82	42	9,876,000	1,599,800	144,400 (9%)	8,276,200	1,318,900 (15%)	
TOTAL	88	21,670,500	7,587,900	3,620,700 (47%)	14,082,600	4,432,500 (31%)	
AUTHORIZED FUNDING		CONTRACT ALLOCATED 35%		INHOUSE REMAINING 64%			

MANUFACTURING METHODS AND TECHNOLOGY PROGRAM
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PROJ NO.	TITLE + STATUS	AUTHORIZED (\$000)	CONTRACT VALUES (\$000)	EXPENDED LABOR AND MATERIAL (\$000)	ORIGINAL PROJECTED COMPLETE DATE	PRESENT PROJECTED COMPLETE DATE
6 77 7201	ARTILLERY WEAPON FIRING TEST SIMULATOR THIS PROJECT IS PHYSICALLY COMPLETE. A FINAL REPORT IS BEING PREPARED.	820.0	699.6	120.4	OCT 78	FE8 83
6 79 7482	MODIFIED RI880N RIFLING GENERATING MACHINE AN RFP HAS BEEN GENERATED. PROPOSALS WILL BE EVALUATED AS THEY ARE RECEIVED.	76.0		34.1	APR 81	SEP 84
6 76 7580	PILOT AUTOMATED SHCP LOADING AND CONTROL SYSTEM- CAM ALL MODULES ARE OPERATIONAL AND BEING USED. WORK IS IN PROCESS TO PLAN + SCHEDULE CRITICAL COMP. FOR THE OTHER MAJOR ITEMS. THE PROJECT IS TECHNICALLY COMPL. THE FINAL RPT. IS EXPECTED TO BE COMPLETED BY APR 83 AND PUBLISHED IN MAY 83.	350.0	285.2	45.9	SEP 78	MAY 83
6 79 7605	CHEMICALLY BONDED SAND FOR CLOSE TOLERANCE CASTING THE SMALL CORE SAND SYSTEM WAS CHECKED OUT AND THE LAYOUT WAS IMPROVED. A FLOUR MOUNTED CRANE WAS ADDED FOR CONVENIENCE TO THE WORKERS.	127.0	22.0	105.0	MAR 80	JUN 83
6 80 7605	CHEMICALLY BONDED SAND FOR CLOSE TOLERANCE CASTING PLANS FOR LARGE MOLDING SYSTEM COMPLETE. SOME GREEN SAND EQUIPMENT DISMANTLED AND/OR REMOVED. MOST NEW EQUIPMENT RECEIVED. PITS ALMOST COMPLETE FOR NEW SHAKE-OUT AND RECLAIMER UNITS FOR CHEMICALLY BONDED SAND.	252.8		165.0	FE8 82	OCT 83
6 82 7707	AUTOMATED PROCESS CONTROL FOR MACHINING SOFTWARE FOR AN INTERACTIVE COMPUTER PROCEDURE IS BEING DEVELOPED TO AID THE SELECTION OF MACHINING CONDITIONS. NEEDS AT ROCK ISLAND ARSENAL FOR NC PROGRAMMING, INDUSTRIAL ENGINEERING, METHODS AND STANDARDS, AND VARIOUS LEVELS OF MANAGEMENT.	135.0	63.2	5.3	SEP 83	DEC 83
6 78 7710	INJECTION MOLDING OF RUBBER OBTURATOR PADS AN ECP FOR IMPLEMENTING INJECTION MOLDING OF 155MM OBTURATOR PADS AT RIA HAS BEEN APPROVED. REVISION OF THE APPROPRIATE DRAWING IS IN PROGRESS. IMPLEMENTATION WILL BE INITIATED WHEN THE REVISION IS COMPLETED. A FINAL REPORT HAS BEEN COMPLETED.	77.0		77.0	JUL 79	MAY 83
6 81 7724	GROUP TECHNOLOGY OF WEAPON SYSTEMS (CAM) A COMPUTER AIDED PROCESS PLANNING PROGRAM WAS DEVELOPED AND TESTED. THE SOFTWARE IS CURRENTLY BEING REVISED.	180.0	157.5	11.9	JUN 83	JUN 83
6 79 7726	APPLICATION OF COLD AND WARM ROTARY FORGING ***** DELINQUENT STATUS REPORT *****	108.0	33.6	15.3	SEP 80	JUN 83
6 80 7730	MANUFACTURE OF SPLIT RING BREECH SEALS MODIFICATIONS TO KINKING UNIT CONTINUE. TECHNICAL PROPOSALS FOR RING SPLITTING EQUIPMENT WERE EVALUATED AND ACCEPTED. STEP 2 OF 2-STEP PROCUREMENT ACTION IS UNDERWAY. CONSTRUCTION OF A POLISHING FIXTURE IS IN PROCESS.	363.0	0.9	211.0	DEC 82	SEP 83

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PROJ NO.	TITLE + STATUS	AUTHORIZED (\$000)	CONTRACT VALUES (\$000)	EXPENDED LABOR AND MATERIAL (\$000)	ORIGINAL PROJECTED COMPLETE DATE	PRESENT PROJECTED COMPLETE DATE
6 82 7730	MANUFACTURE OF SPLIT RING BREECH SEALS PRELIMINARY TESTING OF THE KINKING UNIT REVEALED SEVERAL WEAK AREAS IN THE MACHINE CONSTRUCTION. MODIFICATIONS ARE UNDERWAY TO CORRECT THESE AREAS.	108.0		3.2	SEP 84	SEP 84
6 77 7753	NOISE SUPPRESSOR F/PDOWER TYPE RECOIL MECHANISM TEST MACHINE THE CONTRACT FOR THE NOISE ATTENUATOR WAS TERMINATED FOR DEFAULT. CURRENTLY THE NOISE SUPPRESSOR IS NOT ACCEPTABLE. MODIFICATIONS ARE BEING PLANNED.	385.0	334.9	48.3	FEB 80	JUN 83
6 79 7802	ESTABLISH MACHINE TOOL PERFORMANCE SPECIFICATIONS THE FINAL TECHNICAL REPORT IS BEING REWRITTEN AT THE REQUEST OF THE PROJECT OFFICER. A TECHNICAL PAPER ON MACHINE TOOL SPECIFICATIONS, BASED ON THE WORK ASSOCIATED WITH THIS PROJECT, HAS BEEN APPROVED FOR PRESENTATION AT NAMRC 83.	287.6	267.5	11.8	JUN 81	JUL 83
6 81 7807	PROGRAMMED OPTICAL SURFACING EQUIPMENT AND METHODOLOGY (CAM) A CONTRACT WAS AWARDED TO THE UNIV. OF ROCHESTER FOR PHASE III OF THIS EFFORT. ALSO, THE TWELVE POSITION TOOL CHANGER IS BEING USED TO LOAD PARTS AUTOMATICALLY + A INTERFEROMETER IS BEING BUILT ON TO THE BED OF THE MACHINE TO ALLOW FOR TESTING.	126.0	109.0	8.4	JUL 83	JUL 83
6 81 7916	APPLICATION OF LOW COST MANDREL MATERIALS TWO 120MM AUTOFRETTAGING MANDRELS WERE MADE. FIVE GUN TUBES WERE SUCCESSFULLY AUTO-FRETTAGED WITH ONE MANDREL. MANDREL WAS UNDAMAGED. THESE MANDRELS ARE OFFERED TO OPERATIONS FOR FURTHER TEST.	168.0	41.5	95.1	SEP 83	SEP 83
6 81 7925	BORE EVACUATOR BORING PLANETARY HEADS AND GEAR CASE ASSEMBLIES SHIPPED TO CONTRACTORS PLANT. CONSTRUCTION OF SPECIAL MACHINE IN PROCESS. TEST COMPONENTS ALSO SHIPPED TO CONTRACTOR. DELIVERY DATE OF FINISHED EQUIPMENT PROJECTED TO BE JUNE 1983.	248.0	205.0	17.7	SEP 83	SEP 83
6 82 7926	HOT ISOSTATIC PRESSING (HIP) OF LARGE ORDNANCE COMPONENTS PROCUREMENT ACTION HAS BEEN INITIATED TO OBTAIN ADDITIONAL HOT ISOSTATICALLY PRESSED LOW ALLOY STEEL BILLETS. TWO FULL SIZED 8 INCH BREECH BLOCK PREFORMS ARE BEING EVALUATED FOR MECHANICAL AND PHYSICAL PROPERTIES.	295.0	125.0	48.4	SEP 84	SEP 84
6 81 7927	GENERATION OF BASE MACHINING SURFACES THE CONTRACT FOR THE STOCK VERIFICATION MACHINE WAS AWARDED TO COMPUTER TECHNOLOGY CORP. ON 8 JUNE 1982. THE WORK IS PROCEEDING + NO PROBLEMS ARE EXPECTED.	422.0	398.0	15.2	SEP 84	DEC 83

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PROJ NO.	TITLE + STATUS	AUTHORIZED (\$000)	CONTRACT VALUES (\$000)	EXPENDED LABOR AND MATERIAL (\$000)	ORIGINAL PROJECTED COMPLETE DATE	PRESENT PROJECTED COMPLETE DATE
6 81 792B	ROBOTIZED BENCHING OPERATIONS (CAM) AT THIS TIME, A CONTRACT WAS AWARDED TO E.S.I. INC. THE CONTRACT IS FOR ONE YEAR WITH THE ROBOT SCHEDULED FOR DELIVERY FOR EARLY 1982.	287.0	251.2	25.2	SEP 83	SEP 83
6 82 7940	SYNERGISTIC PLATINGS WITH INFUSED LUBRICANTS AN OPERATIONAL PROCEDURE TO MAINTAIN ELECTROLYTE BALANCE FOR PRODUCTION PLATING WAS DEVELOPED. WORK BEGAN ON THE DESIGN OF A PLATING FACILITY. COMPONENTS WILL BE ASSEMBLED AND PLATING TRIALS WILL BE CONDUCTED TO DETERMINE THE EFFICIENCY OF THE DESIGN	175.0	90.0	34.0	NOV 83	NOV 83
6 81 794B	ESTABLISH CUTTING FLUID CONTROL SYSTEM CUTTING FLUID DEMONSTRATION PHASE COMPLETED. VENDOR SURVEY OF RECYCLING EQUIPMENT COMPLETED. INSTRUCTIONAL BRIEFINGS FOR PRODUCTION SUPERVISION HELD. FINAL TECHNICAL REPORT HAS BEEN SUBMITTED AND IS BEING REVIEWED.	164.0	83.6	64.4	JUL 82	JUN 83
6 80 7949	APPLICATION OF GROUP TECHNOLOGY TO RIA MFG (CAM) THE CONTRACTOR HAS COMPLETED THE MAJOR PORTIONS OF IDENTIFYING PART FAMILIES FOR RIAs MACHINED PARTS. DETAILED ANALYSES ARE BEING MADE. RIA IS CONSIDERING EVALUATING GTSS ON ITS PRIME COMPUTER NETWORK.	155.0	81.3	42.1	MAY 82	SEP 83
6 80 7963	GROUP TECHNOLOGY FOR FIRE CONTROL PARTS AND ASSEMBLIES THIS PROJECT IS DIRECTED TOWARD PROCESS PLANNING. FINAL DEBUGGING AND INSTALLATION OF MILPLAN IS UNDERWAY.	303.0	21.4	251.9	DEC 81	SEP 83
6 82 7966	MANUFACTURE OF TRITIUM POWERED RADIO-LUMINOUS LAMPS CONTINUED TESTING AND ANALYSIS OF SAMPLES FURNISHED UNDER 6817966. INITIATED EXAMINATION OF THE PHOSPHOR-BINDER-GLASS INTERFACE TO ASSESS THE COATING PROCESS.	253.0	40.0	45.0	JUN 83	JUN 83
6 80 7985	SMALL ARMS WEAPONS NEW PROCESS PRODUCTION TECHNOLOGY TECHNICAL EFFORT COMPLETE. TECHNICAL REPORT BEING PREPARED.	381.5	282.5	99.0	MAY 81	JUN 83
6 81 7985	SMALL ARMS WEAPONS NEW PROCESS PRODUCTION TECHNOLOGY TESTS OF ULTRASONICALLY EXCITED EJECTOR DRILL UNSUCCESSFUL. TESTING OF CARBIDE BROACH BUTTONS TO BEGIN IN MARCH 1983.	436.0	265.0	127.0	OCT 82	MAY 83
6 82 7985	SMALL ARMS WEAPONS NEW PROCESS PRODUCTION TECHNOLOGY TRIAL LOT OF BARRELS HAVE BEEN HONED. BROACH TRIALS WILL BEGIN IN MARCH 1983. NEGOTIATIONS ARE UNDERWAY WITH GALDABINI TO BUILD AN AUTOMATIC UNC STRAIGHTENING PRESS.	620.0	316.0	90.0	OCT 83	JUN 84
6 80 8004	CO-DEPOSITION OF SOLID LUBRICANTS DURING ANODIZING THE TECHNICAL REPORT IS IN FINAL DRAFT FORM AND SHOULD BE PUBLISHED IN 8/83. PROCEDURES WERE DEVELOPED + PROCESS PARAMETERS WERE OPTIMIZED FOR A HARDCOAT ANODIZING PROCESS FOR THE CO-DEPOSITION OF LUBRICIOUS PARTICLES DURING HARDCOAT ANODIZING OF AL	121.0		121.0	JAN 81	AUG 83

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PROJ NO.	TITLE + STATUS	AUTHORIZED (\$000)	CONTRACT VALUES (\$000)	EXPENDED LABOR AND MATERIAL (\$000)	ORIGINAL PROJECTED COMPLETE DATE	PRESENT PROJECTED COMPLETE DATE
6 80 8017	POLLUTION ABATEMENT PROGRAM CUTTING FLUID RECYCLING SYSTEM MODIFIED, INSTALLED AND IS OPERATIONAL. FINAL TECHNICAL REPORT BEING CORRECTED.	86.0		85.1	JAN 81	MAY 83
6 80 8024	HIGH SPEED ABRASIVE BELT GRINDING ARRANGEMENTS WERE MADE FOR SHIPMENT OF GUN TUBE AND TOOLING WHICH WILL BE USED IN TESTING THE EQUIPMENT AT THE CONTRACTORS PLANT. DUE TO CONTRACTORS FINANCIAL DIFFICULTIES, DELIVERY DATE HAS BEEN DELAYED TO 12 FEB 83.	324.0	303.5	21.1	SEP 82	DEC 83
6 82 8024	HIGH SPEED ABRASIVE-BELT GRINDING THIS PROJECT WILL PERFORM THE TESTING, PRODUCTION APPLICATION, AND OPTIMIZATION OF MACHINING PARAMETERS THAT WILL BE REQUIRED FOR EQUIPMENT DELIVERED AT THE COMPLETION OF 80 8024. 6 80 8024 IS BEHIND SCHEDULE AND ACTIVITY FOR THIS PROJ IS MINIMAL.	142.0		38.0	SEP 84	SEP 84
6 82 8030	MANUFACTURING GUIDE FOR ELASTOMERIC SEALS SEAL AND BACK-UP RING DRAWINGS FOR THE M140 AND M178 GUN MOUNTS HAVE BEEN REVIEWED TO DETERMINE MATERIAL REQUIREMENTS. TWO RUBBER FORMULATIONS AND A FLUORINATED PLASTIC HAVE BEEN SELECTED. TESTS ON TWO OF THEM HAVE BEEN COMPLETED.	123.0		15.1	MAY 83	SEP 83
6 80 8035	COATING TUBE SUPPORT SLEEVES WITH BEARING MATERIALS ALL REQUIRED ANALYSES WERE CONDUCTED ON TEST SPECIMENS. THE PISTONS HAVE PERFORMED VERY SATISFACTORILY. IMPLEMENTATION WILL DEPEND UPON THE OUTCOME OF A COMPARISON STUDY WITH THE STRIP CLADDING AND EXPLOSIVE BONDING PROCESSES.	180.0		159.6	MAR 81	JUN 83
6 81 8035	COATING TUBE SUPPORT SLEEVES WITH BEARING MATERIALS PROGRESS HAS BEEN MADE IN APPLICATION OF THE EXPLOSIVE BONDING TECHNIQUE TO CLADDING BEARING SURFACES OF THE M174 PISTON. MORE TESTS ARE NEEDED TO COMPLETE ESTABLISHMENT OF THIS PROCESS. WORK ON STRIP CLADDING HAS BEEN INITIATED.	200.0	10.8	82.6	JUN 82	AUG 83
6 80 8036	WEAPON AIMING SYSTEM FOR THE 6-DOF SIMULATOR FINAL TESTING OF THE SYSTEM HAS BEEN DELAYED. THE TURRET TO WHICH THE CAMERA WAS TO INTERFACE WAS NOT RECEIVED UNTIL NOV 1982. THE CAMERA HAS BEEN INTERFACED WITH THE TURRET. HOWEVER, EXTENSIVE MODIFICATIONS ARE REQ TO 6-DOF SIMULATOR.	126.0	18.3	89.0	SEP 81	JUN 83
6 80 8047	PASS THRU STEADY RESTS FOR TUBE TURNING RESTS HAVE BEEN DELIVERED TO THE CONTRACTORS PLANT. ASSEMBLY OF THESE RESTS INTO THE PRIMARY MACHINE HAS BEGUN.	369.0	270.0	79.8	JUL 83	SEP 83
6 82 8050	RECYCLING SPENT GUN TUBES BY ESR MELTING REVISED COMPLETION DATE REFLECTS DELAY IN RECEIPT OF FUNDS. THREE SCRAP 8 INCH TUBE ELECTRO-FLAG REMELTED INTO TUBE INGOTS. WORK ORDER ISSUED TO MAKE 105MM M68 PREFORMS FOR ROTARY FORGING.	204.0	92.0	17.5	MAY 84	MAY 84

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PROJ NO.	TITLE + STATUS	AUTHORIZED (\$000)	CONTRACT VALUES (\$000)	EXPENDED LABOR AND MATERIAL (\$000)	ORIGINAL PROJECTED COMPLETE DATE	PRESENT PROJECTED COMPLETE DATE
6 80 8051	APPLICATION AND CONTROL OF MACHINE TOOLS (CAM) FINAL DESIGN OF MACHINE PERFORMANCE DATA BASE WAS COMPLETED. WORK STARTED ON MAINTENANCE/RELIABILITY DATA BASE AND TOOL DATA BASE. DATA WAS COLLECTED FROM RIA MACHINE TOOL AND NC CONTROL MAINTENANCE RECORDS IN DESIGNING DATA FORMATS/COMPUTER ROUTINES	208.5	150.6	39.8	AUG 81	JUL 83
6 81 8054	OPTICAL SCRATCH AND DIG STANDARDS FOR FIRE CONTROL SYSTEMS DECILOG LET A CONTRACT TO QUALITRON FOR TWO MASKS MADE TO SPEC. PHOTOLITHOGRAPHY AND CHEMICAL ETCHING WILL BE DONE AT TEXAS A&M UNIV. SAMPLES WILL BE EVALUATED AT NBS. IMPLEMENTATION WILL BE DONE BY DRDAR-QAF-1 INITIATING ECP FOR MIL-O-13830.	266.0	146.1	27.8	AUG 84	AUG 84
6 80 8057	DUAL RIFLING BROACH REMOVAL SYSTEM FURTHER MACHINING OF RIFLING BARS HAS BEEN ACCOMPLISHED. ADDITIONAL TESTING WILL BE RESUMED.	215.0	21.5	135.3	SEP 82	SEP 83
6 82 8062	RAPID INTERNAL THREADING A DETAILED SPEC HAS BEEN PREPARED AND FORWARDED TO PROCUREMENT FOR SOLICITATION ACTION.	366.0		5.4	JUL 84	JUL 84
6 82 8102	POWDER METALLURGY FORGINGS WEAPONS COMPONENTS PROCUREMENT ACTION HAS BEEN INITIATED TO CONTRACT TO PRODUCE PROTOTYPE SPLIT RINGS VIA P/M FORGING FOR TESTING AND ANALYSIS.	110.0		11.0	SEP 84	SEP 84
6 82 8103	HIGH VELOCITY MACHINING REVIEW ON VARIOUS PUBLISHED REPORT RELATIVE TO ONGOING WORK IN THE AREA OF HIGH VELOCITY MACHINING CONTINUED DURING THIS REPORTING PERIOD. IT WILL BE POSSIBLE TO DEVELOP PROJECT PARAMETERS WHICH COMPLEMENT THE ARMY'S TOTAL EFFORT IN THIS AREA.	37.0		23.6	SEP 83	SEP 83
6 81 8105	ESTABLISH ROUGH THREAD BLANKS, 8 IN M201 BUSHING A CONTRACT HAS BEEN AWARDED AND ACTION HAS BEEN INITIATED TO MOVE SUITABLE EQUIPMENT TO THE CONTRACTORS PLANT.	292.0	250.0	14.2	SEP 83	DEC 84
6 81 8106	LARGE CALIBER POWDER CHAMBER BORING INSTALLATION OF HOLLOW SPINDLE BORING LATHE TO TEST PROJECT RESULTS HAS BEEN COMPLETED. THE BORING BAR SYSTEM HAS BEEN INSTALLED AND 80 PERCENT OF THE ANCILLARY EQUIPMENT HAS BEEN COMPLETED AND INSTALLED.	156.2	110.2	39.3	JUN 83	SEP 83
6 82, 8106	LARGE CALIBER POWDER CHAMBER BORING LIMITED EQUIPMENT TESTING REVEALED NUMEROUS MACHINE DEFICIENCIES WHICH HAVE BEEN MOSTLY CORRECTED. BORING BAR TESTS VALIDATED THE BALANCED CUTTING ACTION CONCEPT. STABILITY AND CHIP BREAKAGE ACHIEVED INDICATE THE PROCESS HAS GOOD SUCCESS PROBABILITY.	72.0	55.0	15.3	SEP 84	SEP 84

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PROJ NO.	TITLE + STATUS	AUTHO- RIZED (\$000)	CONTRACT VALUES (\$000)	EXPENDED LABOR AND MATERIAL (\$000)	ORIGINAL PROJECTED COMPLETE DATE	PRESENT PROJECTED COMPLETE DATE
6 80 8107	CREEP FEED CRUSH FORM GRINDING FOUNDATION AND MACHINE LAYOUT DRAWINGS HAVE BEEN REVIEWED AND ACCEPTED. THE DELIVERY SCHEDULE HAS BEEN SLIPPED SEVERAL MONTHS DUE TO AN ACCIDENT WHICH DESTROYED THE MACHINE CASTING.	580.3	553.4	26.9	MAY 83	SEP 83
6 81 8107	CREEP FEED CRUSH FORM GRINDING MANUFACTURING SEQUENCE ROUTING HAS BEEN INITIATED. MACHINE SETUP PARAMETERS ARE BEING REVIEWED FOR COMPLIANCE WITH SOUND MANUFACTURING PROCEDURES AND APPLICABLE SAFETY STANDARDS.	73.0	14.0	24.9	JUL 84	JUL 84
6 82 8108	PRODUCTION/IN-PROCESS INSPECTION OF OPTICAL BONDS RESPONSE TO RFQ GREATER THAN AVAILABLE FUNDS. PROJECT WILL BE DONE INHOUSE. INTERFEROMETER AND AUTOCOLLIMATOR WILL BE ACQUIRED TO MEASURE OPTICAL PRECISION AND ADHESIVE CREEP. BOND INTEGRITY DETERMINED BY THERMAL ENERGY DISTRIBUTION FROM HEATING.	205.0		47.6	DEC 83	JAN 84
6 81 8113	ESTABLISHMENT OF ION PLATING PROCESS FOR ARMAMENT PARTS SELECT ARMAMENT COMPONENTS WERE COATED BY THE ION VAPOR DEPOSITION PROCESS. COATED ITEMS HAVE BEEN EVALUATED. A TECHNICAL REPORT IS BEING PREPARED.	141.6	50.0	91.6	SEP 82	SEP 82
6 82 8113	ESTABLISHMENT OF ION PLATING PROCESS FOR ARMAMENT PARTS THE ESTABLISHMENT OF PLANT SET-UP AND OPERATIONAL PROCEDURES HAS BEEN COMPLETED. FINAL OPTIMIZATION, EVALUATION, AND ANALYSIS WILL BE CONDUCTED.	142.0		1.7	SEP 83	SEP 83
6 81 8135	IN-PROCESS CONTROL OF MACHINING A CONTRACT IS BEING NEGOTIATED. AFTER CONTRACT AWARD A REBUILT NC MILLING MACHINE WILL BE SHIPPED TO THE CONTRACTOR FOR MODIFICATIONS.	746.0		24.6	OCT 82	JAN 84
6 82 8135	IN-PROCESS CONTROL OF MACHINING SEE PROJECT 6 81 8135. THIS PROJECT IS PHASE II OF A TWO PHASE PROGRAM. PHASE II WILL BE DIRECTED TOWARD TURNING AND BORING, PHASE I WILL BE DIRECTED TOWARD MILLING.	841.0		2.5	FEB 84	JAN 85
6 81 8136	IMPROVED IMPULSE PROGRAMMERS FOR HYDRAULIC SIMULATORS PRELIMINARY CONCEPTS HAVE BEEN DISCUSSED. A COMPUTER MODEL IS BEING GENERATED.	80.0		4.9	SEP 83	SEP 84
6 81 8151	PORTABLE ENGRAVING SYSTEM A REQUEST HAS BEEN SENT TO PROCUREMENT TO ARRANGE A CONFERENCE CALL AND/OR ON SITE VISIT WITH EACH VENDOR.	84.0		28.0	DEC 82	SEP 83
6 82 8151	PORTABLE ENGRAVING SYSTEM FUNDS HAVE BEEN COMMITTED FOR SUBSEQUENT PURCHASE OF PORTABLE ENGRAVER.	171.0		1.1	JAN 84	SEP 84

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PROJ NO.	TITLE + STATUS	AUTHORIZED (\$000)	CONTRACT VALUES (\$000)	EXPENDED LABOR AND MATERIAL (\$000)	ORIGINAL PROJECTED COMPLETE DATE	PRESENT PROJECTED COMPLETE DATE
6 81 8152	IMPROVED ANODE STRAIGHTNESS FOR CHROMIUM PLATING A SUB-SCALE UNIT HAS BEEN COMPLETED AND IS UNDER TEST. MATERIALS FOR A FULL SCALE ANODE HAVE BEEN ORDERED AND FABRICATION OF A COMPONENT HAS STARTED, USING MATERIALS ON HAND.	280.0	122.0	136.0	AUG 73	FEB 84
6 81 8153	INCREASING GUN TUBE HEAT TREATMENT CAPACITY SOME EVALUATIONS TO DETERMINE THE REQUIRED COOLING BETWEEN FORGING AND HEAT TREAT HAVE BEEN PERFORMED. IN-HOUSE AND CONTRACTOR EFFORTS WILL INVESTIGATE THE USE OF INDUCTION HEATING FOR HEAT TREATMENT.	325.0	202.0	74.3	MAY 83	SEP 83
6 81 8154	COMPUTER INTEGRATED MANUFACTURING (CIM), DDNC A REQUEST FOR PROPOSAL WAS ISSUED. TECHNICAL PROPOSALS ARE CURRENTLY BEING ISSUED. BIDDERS ARE IN THE PROCESS OF PROVIDING ADDITIONAL INFORMATION.	442.0		15.3	DEC 83	APR 84
6 81 8165	STANDARDS FOR DIAMOND TURNED OPTICAL PARTS ROUGHNESS STANDARDS OF 10 ANGSTROMS AND 250A HAVE BEEN MANUFACTURED AND CHECKED VIA INDEPENDENT METHODS. A DEMONSTRATION OF THE TOTAL INTEGRATED SCATTER METHOD IS SCHEDULED FOR MAR 83. FIXTURES FOR HANDLING THE OPTICAL PARTS HAVE BEEN FABRICATED.	189.0		117.0	DEC 82	MAR 83
6 82 8165	STANDARDS FOR DIAMOND TURNED OPTICAL PARTS NO SIGNIFICANT WORK ACCOMPLISHED DURING THIS REPORTING PERIOD. THE DESIGN AND FABRICATION OF A PROTOTYPE SYSTEM IS DEPENDENT UPON SUCCESSFUL CONCLUSION OF A FEASIBILITY DEMONSTRATION. NAVAL WEAPONS LAB AT CHINA LAKE WILL BE THE DEMO SITE.	258.0			OCT 83	MAR 84
6 81 8209	PILOT PRODUCTION OF GRADIENT INDEX OPTICS THIS PROJECT CONTINUES THE WORK FROM 6 80 8209 WITH PILOT LINE SET UP. THE METROLOGY EQUIPMENT HAS BEEN MODIFIED AND PROTOTYPE GRIN LENS BLANKS ARE BEING FABRICATED. EXPECT INCREASE \$100K IN JANUARY. PROCESSED INCLUDE ION DIFFUSION + CURVE GRINDING.	274.0	197.0	10.0	MAY 83	DEC 84
6 82 8231	IMPROVED CASTING TECHNOLOGY (CAD/CAM) INFORMATION ON RELATED EFFORTS IS BEING GATHERED FOR ANALYSIS. IRON AND ALUMINUM ALLOYS ARE THE PRIMARY EMPHASIS.	250.0		29.7	MAR 84	MAR 84
6 82 8238	BORING BREECH RING LUGS EQUIPMENT HAS BEEN SELECTED FOR PROJECT APPLICATION. TOOLING AND EQUIPMENT SPECIFICATIONS HAVE BEEN INITIATED.	203.0		28.4	AUG 84	AUG 84
6 82 8241	COMPUTER DIAGNOSTICS AND CONTROL FOR 80RE GUIDANCE ALL SEQUENTIAL OPERATIONS OF THE GUIDED 80RE LATHE HAVE BEEN EVALUATED. THESE OPERATIONS INCLUDE ON-OFF SWITCHES, RELAYS, ETC. THE PERFORMANCE AND TIMING OF THESE OPERATIONS HAVE BEEN REDUCED TO BOOLEAN LOGIC EQUATIONS.	308.0		0.5	JUN 85	JUN 85

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PROJ NO.	TITLE + STATUS	AUTHOR- RIZED	CONTRACT VALUES	EXPENDED LABOR AND MATERIAL (\$000)	ORIGINAL PROJECTED COMPLETE DATE	PRESENT PROJECTED COMPLETE DATE
6 82 8242	DUAL PRESS STRAIGHTENING OF GUN TUBES PURCHASED SPECIMEN MATERIAL AND EXTENSION METER. MADE AND TESTED FRACTURE TOUGHNESS OF SPECIMENS STRAINED AT ROOM TEMPERATURE. DESIGNED TWO POINT-LOADING DEVICE.	120.0	1.7	21.8	NOV 83	NOV 83
6 82 8243	COMPUTER CONTROL FOR ELECTRODEPOSITION SYSTEMS THE XYCOM-LADDER DIAGRAM TRANSLATING SYSTEM HAS BEEN RECEIVED AND IS BEING EVALUATED. SOFTWARE FOR PROGRAMMING THE PROCESS CONTROLLERS AND FOR GENERATING REPORTS HAVE BEEN RECEIVED AND ARE BEING EVALUATED.	301.0	51.2	200.8	MAY 84	DEC 84
6 82 8244	OPTIMIZE THE HEAT TREATMENT OF ROTARY FORGE TUBES A COMPUTER PROGRAM HAS BEEN PREPARED TO ANALYZE DATA OF TUBES HEAT TREATED TO DATE. EXISTING VENDOR DATA, CHEMISTRIES AND HEAT TREAT PARAMETERS ARE BEING ANALYZED FOR OPTIMIZATION OF THE RESULTING MECHANICAL PROPERTIES AFTER HEAT TREATMENT.	290.0		25.6	MAR 84	APR 84
6 82 8245	APPLICATION OF EROSION RESIS LOW CONTRACTION CHROMIUM PLATE BIDS FOR THE PURCHASE OF A PROCESS CONTROLLER HAVE BEEN RECEIVED AND SHOULD BE AWARDED SOON. MODIFICATION OF THE EXISTING CLOSED LOOP FACILITY TO PLATE LC CHROMIUM HAS BEEN INITIATED AND IS ABOUT 25 PERCENT COMPLETE.	241.0	81.5	97.1	JUN 84	DEC 84
6 82 8246	GAS CHECK SEAT FINISHING FINAL DESIGN FOR GAS CHECK SEAT FINISHING EQUIPMENT IS 50 PERCENT COMPLETE. MANUFACTURE OF SUPPORT FIXTURES AND HEAD TRAVERSING MECHANISM HAS BEEN INITIATED. MATERIAL FOR CONSTRUCTION OF OUTBOARD SUPPORT UNITS HAS BEEN ORDERED FROM OUTSIDE SUPPLIER.	151.0		34.0	JUN 84	JUN 84
6 82 8248	APPLICATION OF HIGH-RATE CUTTING TOOLS RECENT DEVELOPMENTS IN TOOLING AND TOOLING SUPPORT SYSTEMS WERE DISCUSSED WITH TOOL DEVELOPMENT AND TEST ENGINEERS FROM RIA AND SEVERAL CONTRACTORS. NITRIDE COATED DRILLS AND END MILLS WERE SELECTED FOR TESTS, AS WERE CARBIDES/COATINGS F/TURNING TEST	102.0	47.0		JUN 83	DEC 83
6 82 8251	IMPROVED MELTING PRACTICES THREE DIFFERENT HOLDING SANDS WERE EVALUATED BY DIETERT CORP AND A GENERAL REVIEW OF MELTING PRACTICES ARE BEING EVALUATED WITH RECOMMENDATIONS FORTH COMING FROM LECO CORP. ALL OF THE ABOVE SHOULD RESULT IN IMPROVED MELTING PRACTICES.	193.0	7.2	34.9	JUN 83	AUG 83
6 82 8252	INDUCTION HEATING OF A VARYING DIAMETER PREFORM A SPECIFICATION FOR A TEMPERATURE FEEDBACK POWER CONTROL IS WRITTEN AND IS BEING PROCESSED BY PROCUREMENT.	241.0	15.0	20.1	MAR 84	SEP 84

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PROJ NO.	TITLE + STATUS	AUTHO- RIZED (\$000)	CONTRACT VALUES (\$000)	EXPENDED LABOR AND MATERIAL (\$000)	ORIGINAL PROJECTED COMPLETE DATE	PRESENT PROJECTED COMPLETE DATE
6 82 8253	MACHINE TOOL DYNAMIC MEASUREMENTS AND DIAGNOSTICS SPECIFICATION FOR EQUIPMENT HAS BEEN COMPLETED AND FORWARDED TO APPROPRIATE DIRECTORATES FOR REVIEW PRIOR TO PROCUREMENT ACTION. PRODUCTION AREA HAS BEEN SELECTED FOR IMPLEMENTATION OF PROJECT HARDWARE.	190.0		31.5	APR 84	SEP 84
6 82 8254	AUTOMATED SURFACE COATING OF CANNON - PAINTING A TECHNICAL WORKING GROUP HAS BEEN ORGANIZED TO INITIATE THE PLAN OF ACTION TO AUTOMATE THE PAINTING OF GUN TUBES.	80.0		1.3	JAN 84	JAN 84
6 82 8259	IMPROVED MANUFACTURING PROCESS FOR FIRE CONTROL REGISTERS THE ENGINEERING DESIGN MILESTONE WAS MOVED TO ALLOW MORE TIME TO EVALUATE NEW PRODUCTS FROM THE INTERNATIONAL MACHINE TOOL SHOW. THE OTHER MILESTONES WERE REVISED TO REFLECT A GREATER UNDERSTANDING OF THE TOTAL PROGRAM SCOPE + REQUIREMENTS.	261.0	14.0	38.6	SEP 84	SEP 85
6 82 8262	PRODUCTION METHODS FOR OPTICAL WAVEGUIDES THIS PROJECT IS IN SOLICITATION. THE GOAL IS TO TRANSITION ION IMPLANTATION OF OPTICAL WAVEGUIDES IN SEMICONDUCTOR FROM R+D TO PRODUCTION. CONTRACT MONITORING WILL SUFFER BECAUSE OF FY83 FUNDING CUTBACK.	480.0	408.0	62.0	JAN 83	APR 85
6 82 8263	PRODUCTION/IN-PROCESS INSPECTION OF LASER RANGEFINDERS THE PRODUCTION/IN-PROCESS INSPECTION DEVICE CONTRACT WAS AWARDED. INITIAL DEVICE MOUNTING AND REGISTRATION TECHNIQUES HAVE BEEN COMPLETED. THE CONTRACT SCOPE ON WORK HAS BEEN EXPANDED TO INCLUDE DYNAMIC RECEIVER SENSITIVITY MEASUREMENT.	355.0	100.0	111.0	AUG 83	DEC 83
6 82 8267	STRESS PEENING OF HELICAL COMPRESSION SPRINGS PROPOSALS HAVE BEEN RECEIVED FROM NINE POTENTIAL CONTRACTORS, BUT ADDITIONAL FUNDS IN THE AMOUNT OF \$35K ARE REQUIRED FOR THE CONTRACT EFFORT.	109.0		28.0	AUG 83	JUL 84
6 81 8305	INTEGRATED MANUFACTURING SYSTEM (IMS) - (CAM) SCOPE OF WORK HAS BEEN PREPARED. STAFFING OF SCOPE OF WORK FOR APPROPRIATE REVIEW IS IN PROGRESS. ADDITIONAL EFFORT MAY BE DELAYED PENDING RECEIPT OF ADP APPROVAL.	235.0		33.3	JUL 82	SEP 86
6 82 8305	INTEGRATED MANUFACTURING SYSTEM (IMS) - (CAM) NO SIGNIFICANT ACCOMPLISHMENTS DURING THIS REPORTING PERIOD.	204.0			SEP 86	SEP 86
6 82 8306	ON-LINE PRODUCTION INFORMATION SYSTEM (CAM) PURCHASE SPECIFICATION WAS PREPARED. ADDITIONAL EFFORT MAY BE DELAYED PENDING RECEIPT OF ADP APPROVAL.	70.0		1.4	OCT 84	OCT 84

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6 81 8341	HOLLOW CYLINDER CUT OFF MACHINE COMPLETED SPEC FOR AUTOMATED DUAL HEAD ROTARY ABRASIVE SAM. INITIATED PROCUREMENT OF FORGED TUBES FOR TEST AND VERIFICATION TRIALS.	84.0	29.0	40.5	JUN 82	SEP 83
6 82 8341	HOLLOW CYLINDER CUT OFF MACHINE **** DELINQUENT STATUS REPORT ****	655.0			SEP 84	SEP 84
6 82 8346	DEBURRING OF BORE EVACUATOR HOLES CYLINDRICAL SPECIMENS DUPLICATING THE CONFIGURATION AND DIMENSIONS OF THE BORE EVACUATOR HAVE BEEN DESIGNED AND WILL BE FABRICATED. TOOLING HAS BEEN DESIGNED AND IS APPROXIMATELY 50 PERCENT COMPLETE.	224.0		59.5	NOV 84	NOV 84
6 82 8370	AUTOMATIC INSP AND PROC CONTROL OF WEAPONS PARTS MFG THE BATTLE PACIFIC N.W. LABS CONTRACT WORK WAS COMPLETED DURING THIS PERIOD. THE COMPETING DRAPER LABS EFFORT, FUNDED BY PROJECT 6 81 7985 WILL BE COMPLETED IN MAR 1983. THESE COMPETING EFFORTS ARE FOR THE DEV OF AN AUTO GUN BARREL STRAIGNING METHOD	193.0	93.0	72.5	SEP 83	SEP 83
6 82 8416	FLEXIBLE MACHINING SYSTEM - RIA (CAM) A CONTRACT IS BEING NEGOTIATED. AN INITIAL SELECTION OF 56 POTENTIALLY FMS COMPATIBLE PARTS WAS DEVELOPED.	138.0			SEP 83	SEP 83
6 82 8448	BRAIDED PROCESS FOR 80RE EVACUATOR SPECIFICATIONS AND A TECHNICAL DATA PACKAGE FOR A BRAIDING MACHINE HAVE BEEN PREPARED AND SUBMITTED TO PROCUREMENT.	260.0		15.5	SEP 84	SEP 84

APPENDICES

APPENDIX I: COMMAND IDENTIFICATION

APPENDIX: ARMY ACTION COMMAND/ACTIVITY IDENTIFICATION

<u>Action Command Identifier</u>	<u>Acronym</u>	<u>Command</u>
Management Engineering Training Activity	AMETA	D
Mobility Equipment R&D Command	MERADCOM	E
Depot Systems Command	DESCOM	G
Electronics R&D Command	ERADCOM	H
Army Materials and Mechanics Research Center	AMMRC	M
Natick R&D Laboratories	NLABS	Q
Test & Evaluation Command	TECOM	0
Aviation R&D Command	AVRADCOM	1
Communications & Electronics Command	CECOM	2
Missile Command	MICOM	3
Tank-Automotive Command	TACOM	4
Armament Materiel Readiness Command (Munitions)	ARRCOM (Ammo)	5
Armament R&D Command (Munitions)	ARRADCOM (Ammo)	8
Armament Materiel Readiness Command (Weapons)	ARRCOM (Wpns)	6
Armament R&D Command (Weapons)	ARRADCOM (Wpns)	9
Troop Support & Aviation Materiel Readiness Command	TSARCOM	7

NOTE: Abbreviation - R&D - Research and Development

APPENDIX II: PROJECT SLIPPAGE STUDY

PROJECT SLIPPAGE STUDY

The purpose of this study is to monitor trends in the timeliness of the MMT Project Execution. Figure 1 is a slippage profile for each command and for the program as a whole. In the past, the slippage profile has tended to be very consistent. The number of projects in the "No Data" column is for the most part caused by recent funding of new projects for which no status reports or milestone charts were submitted. The number in this column is usually larger during the 2nd period of the year than the 1st since that is the period when most new projects are funded. When combined with the figures from the "0 Mo" column, you have that part of the program for which no slippage problems exist. There is a significant difference between the "No Data" columns (17%) for this period and the "No Data" column for the corresponding 2nd half CY81 period (22%). This is due to the reduced funding of the FY 83 program (R&D funded) and the smaller number of FY 83 projects that could be approved. The other five columns continue to remain within the ± 4 percentage point range which has consistently been exhibited from reporting period to reporting period. This chart's net result reflects the best slippage profile since the inclusion of this indicator.

There are two problems that affect accurate project slippage reporting. One problem is delinquent status reports which during the current reporting period, numbered 45. This delinquency results in a larger number of active projects because final status reports are not submitted for those delinquent projects that have in actuality been closed out. These "completed" projects then increase in months of slippage which could account for a larger than actual percentage of projects in the "25+ Mo" columns. Although delinquency has gone down, there continues to be delinquent status reports every period so the general consistency still remains. A further decrease in delinquency of project status reports will improve the accuracy of the project slippage profile.

Another problem that affects accurate project slippage reporting is the basis on which final status reports are submitted. Some organizations await financial close-out before submitting final status reports. By doing this, several months might be added to the apparent duration of the project. The general policy has been that final status reports should be submitted when the technical work has been physically completed. If outstanding financial action does not hinder project implementation, then the time required for financial close-out is not meant to be added to an indicator which measures engineering achievement. Continued emphasis on using a consistent basis for project close-out, namely technical completion, will provide a more accurate accounting of the technical life of MMT projects.

P R O J E C T S L I P P A G E S T U D Y

COMMAND	NO. ACTIVE PROJECTS	PROJECT SLIPPAGE DISTRIBUTION (PERCENT)						
		NO DATA	0 MO	1-6 MO	7-12 MO	13-18 MO	19-24 MO	25+ MO
AMETA	7	14	43	14				29
MERADCOM	10		20		10	20	30	20
DESCOM	12	58	25		8			8
ERADCOM	48	17	10	6	13	17	13	25
AMMRC	7	14	43			14		29
NLABS	4	25			25	25		25
TECOM	3	33	67					
AVRADCOM	50	14	22	18	14	16	6	10
CECOM	11	18		9	18	36	9	9
MICOM	39	28	36	10	8	8	5	5
TACOM	68	16	32	12	7	7	9	16
ARRADCOM-ARRCOM (AMMO)	155	16	21	11	15	9	7	21
ARRADCOM-ARRCOM (WPNS)	104	15	31	16	13	6	5	14
TSARCOM	3		33	33	33			
	----	---	---	---	---	---	---	---
SUMMARY (DARCOM WIDE)	*521	17	25	12	12	10	7	17
2ND CY81 SUMMARY	561	22	22	10	13	10	7	15

*FIGURES REFLECT DATA ON THE ACTIVE PROGRAM AS OF 5 APR 83.

Figure 1 - Slippage Profile

APPENDIX III: USER'S GUIDE

MANUFACTURING METHODS AND TECHNOLOGY PROGRAM
SUMMARY PROJECT STATUS REPORT
2ND SEMIANNUAL SUBMISSION CY 82 RCS DRCHT-3D1

PROJ NO.	TITLE + STATUS	AUTHO- RIZED (\$000)	CONTRACT VALUES (\$000)	EXPENDED LABOR AND MATERIAL (\$000)	ORIGINAL PROJECTED COMPLETE DATE	PRESENT PROJECTED COMPLETE DATE		
T 82 6079 02	RAPIDLY SOLIDIFIED TECHNOLOGY -RST- NICKLE-BASE SUPERALLOY CAP PROCESS DEFINITION COMPLETED, AND CAP VARIABILITY STUDY IS BEING EVALUATED. CAP DISKS HAVE BEEN MANUFACTURED USING DIFFERENT CROSS-ROLLING AND HEAT TREATMENT PROCESS.	400.0	350.0	20.0	SEP 83	MAY 84		
T 82 6079 03	81-CAST HIGH PRESSURE TURBINE NOZZLE WORK ON PERFORMANCE, AERODYNAMIC, THERMAL, AND STRUCTURAL ANALYSIS CURRENTLY IN PROGRESS AND IS EXPECTED TO BE COMPLETED BY 2Q FY83.	450.0	416.0	16.0	OCT 83	MAR 85		
T 81 6089	ABRAMS TANK PLANT-- TECH MOD PROGRAM PRELIMINARY SCOPE OF WORK COMPLETED AND REVIEWED BY M1 PMO.	100.0		51.0	SEP 83	JAN 83		
T 82 6090	TOOLE ARMY DEPOT PRODUCTIVITY IMPROVEMENT PROGRAM A MAJORITY OF THE PREPARATORY WORK OF THE INDUSTRIAL PRODUCTIVITY IMPROVEMENT PROGRAM HAS BEEN COMPLETED. TEAD PERSONNEL ATTENDED IDEF SEMINARS AT TEXAS A+M UNIVERSITY.	100.0		7.2	MAY 83	MAY 83		
T 81 6098	PRODUCTION OF SPECIAL ARMOR STEEL THE CONTRACTOR HAS BEEN SUCCESSFUL IN ROLLING 2 INCH THICK MATERIALS WITH THE DESIRED TEXTURING. THE STEEL PRODUCED MEETS THE ESTABLISHED REQUIREMENTS OF TEXTURE AND HARDNESS.	900.0	328.0	150.0	NOV 83	NOV 83		
T 81 6099	MANUFACTURING METHODS FOR SPECIALIZED ARMOR MATERIALS AMMRC, ARRADCOM AND PMB HAVE INITIATED ACTIVITY IN AREAS OF MATERIALS, PROCESSES AND FACILITIES TOWARD REALIZING THE PROGRAM OBJECTIVE.	3,550.0	3.3	200.0	JUL 84	MAR 84		
T 82 6107	IMPROVED MBT TRACK FUNDING WAS DRASTICALLY REDUCED. PROCUREMENT REQUESTS HAVE BEEN PREPARED, AND ARE READY FOR AWARD AFTER FY 83 FUNDS ARE RECEIVED.	193.0		100.0	SEP 83	JUN 83		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)

(4)

THIS FORM IS USED FOR SUMMARIZING
THE MMT PROGRAM PROJECTS' STATUS.
USER'S GUIDE BELOW EXPLAINS THE
SIGNIFICANCE OF EACH COLUMN HEREIN.

USER'S GUIDE
to
SUMMARY PROJECT STATUS REPORT

COLUMN 1. <u>PROJECT NUMBER</u>	COLUMN 5. <u>AUTHORIZED</u>
A project identified by the first and last four digits which corresponds to the project title for the life of its execution. However, for accounting and reporting purposes, a project is recognized by the totality of its seven-digit numeric or alphanumeric number. Example:	The total amount of funds authorized in dollars, to complete the project.
3 75 6241	COLUMN 6. <u>CONTRACT VALUES</u>
Project identifying number, which corresponds to the project title and is designated by action command.	The portion of authorized funds actually expended or obligated for work performed by private industry.
Fiscal year of funding - the only two digits that may vary according to funding frequency (7T for FY transition).	COLUMN 7. <u>EXPENDED LABOR AND MATERIAL</u>
Action command (see list in Appendix I).	The portion of authorized funds actually expended in-house, namely within the Government.
COLUMN 2. Subtask identifier, if any.	COLUMN 8. <u>ORIGINAL PROJECTED COMPLETION DATE</u>
COLUMN 3. <u>PROJECT TITLE</u>	Calendar date clearly given in, or the nearest calendar month and year as could be read from the Milestone Chart of, the very first Project Status Report, RCS DRCMT-301.
The title descriptive of project effort.	COLUMN 9. <u>PRESENT PROJECTED COMPLETION DATE</u>
COLUMN 4. An abstract of project status taken from the Project Status report. Whenever possible, technical accomplishments during the reporting period were summarized.	Calendar date clearly given in, or the nearest calendar month and year as could be read from Milestone Chart of, the latest Project Status Report, RCS DRCMT-301.

APPENDIX IV: ARMY MMT PROGRAM REPRESENTATIVES

ARMY MMT PROGRAM REPRESENTATIVES

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US Army Materiel Development and Readiness Command

ATTN: DRCMT

5001 Eisenhower Avenue

Alexandria, VA 22333

C: 202 274-8284/8298

AV: 284-8284/8298

AVRADCOM

US Army Aviation R&D Command

ATTN: DRDAV-EGX, Mr. Dan Haugan

4300 Goodfellow Blvd.

St. Louis, MO 63120

C: 314 263-1625

AV: 693-1625

CECOM

US Army Communications Electronics Command

ATTN: DRSEL-POD-P-G, Messr Feddeler/Esposito/Resnic

C: 201 535-4926

AV: 995-4926

ATTN: DRSEL-PC-I-IP, Mr. Leon Field

Fort Monmouth, NJ 07703

C: 201 532-4035

AV: 992-4995

ERADCOM

US Army Electronics R&D Command

ATTN: DELET-R, Mr. Joseph Key

Fort Monmouth, NJ 07703

C: 201 544-4258

AV: 995-4258

ATTN: DRDEL-PO-SP, Mr. Harold Garson

2800 Powder Mill Road

Adelphi, MD 20983

C: 202 394-3448

AV: 290-3448

MICOM

US Army Missile Command

ATTN: DRSMI-RST, Mr. Richard Kotler

Redstone Arsenal, AL 35898

C: 205 876-2065

AV: 746-2065

TACOM

US Army Tank-Automotive Command

ATTN: DRSTA-RCKM, Mr. Donald Cargo

Warren, MI 48090

C: 313 574-6065

AV: 786-6065

ARRCOM

US Army Armament Materiel Readiness Command

ATTN: DRSAR-IRI-A, Mr. Dennis Dunlap

Rock Island Arsenal

Rock Island, IL 61299

C: 309 794-3666/4398

AV: 793-3666/4398

ARRADCOM

US Army Armament R&D Command

ATTN: DRDAR-PMP-P, Mr. Donald J. Fischer

Dover, NJ 07801

C: 201 724-2708

AV: 880-2708

TSARCOM

US Army Troop Support and Aviation Materiel Readiness Command

ATTN: DRSTS-PLE, Mr. Don G. Doll

4300 Goodfellow Blvd.

St. Louis, MO 63120

C: 314 263-2218

AV: 693-2218

MERADCOM

US Army Mobility Equipment R&D Command
ATTN: DRDME-UE, Mr. R. Goehner
Fort Belvoir, VA 22060

C: 703 664-4221
AV: 354-4221

NLABS

US Army Natick R&D Laboratories
ATTN: DRDNA-EML, Mr. Frank Civilikas
Natick, MA 01760

C: 617 651-4883/4882
AV: 256-4883/4882

TECOM

US Army Test & Evaluation Command
ATTN: DRSTE-AD-M, Mr. John Gehrig
Aberdeen Proving Ground, MD 21005

C: 301 278-3677
AV: 283-3677

AMMRC

US Army Materials & Mechanics Research Center
ATTN: DRXMR-PP, Mr. John Gassner
Watertown, MA 02172

C: 617 923-5521
AV: 955-5521

HDL

Harry Diamond Laboratories
ATTN: DELHD-PO-P, Mr. Julius Hoke
2800 Powder Mill Road
Adelphi, MD 20783

C: 202 394-1551
AV: 290-1551

RIA

Rock Island Arsenal
ATTN: SARRI-FNM, Mr. J. W. McGarvey
Rock Island, IL 61299

C: 309 794-4142
AV: 793-4142

WVA

Watervliet Arsenal
ATTN: SARWV-PPI, Mr. Charles Hall
Watervliet, NY 12189

C: 518 266-5319
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MPBMA

US Army Munitions Production Base Modernization Agency
ATTN: SARPM-PBM-DP, Mr. Joseph Taglairino
Dover, NJ 07801

C: 201 724-6708
AV: 880-6708

AMRDL

US Army Applied Technology Laboratory
US Army Research Technology Lab (AVRADCOM)
ATTN: DAVDL-ATL-ATS, J. Waller
Fort Eustis, VA 23604

C: 804 878-2771/3073
AV: 927-2771/3073

DESCOM

US Army Depot System Command
ATTN: DRSDS-RM-EIE, Mr. Jim Shindle
Chambersburg, PA 17201

C: 717 263-6321
AV: 242-6321

IBEA

US Army Industrial Base Engineering Activity
ATTN: DRXIB-MT, Mr. James Carstens
Rock Island, IL 61299

C: 309 794-5113
AV: 793-5113

Department of the Army

ODCSRDA

ATTN: DAMA-PPM-P, LTC S. Marsh

Room 3C400, The Pentagon

Washington, DC 20310

C: 202 695-0507

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AMETA

US Army Management Engineering Training Activity

ATTN: DRXOM-SE, Mr. Paul Wagner

Rock Island, IL 61299

C: 309 794-4041

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DARCOM Intern Training Center

ATTN: DRXMC-ITC-E, Mr. Mickey Carter

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